THE

MEDICAL AND SURGICAL REPORTER.

No. 1294] PHILADELPHIA, DECEMBER 17, 1881. [Vol. XLV.—No. 25.

ORIGINAL DEPARTMENT.

LECTURE.

SOME PHENOMENA OF LABOR.

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Translated for the MED. AND SURG. REPORTER.

GENTLEMEN:—The pregnant female is warned that she is about to be delivered, by the appearance of certain prodromic phenomena, such as the descent of the uterus, greater facility of respiration, infiltration of the labiæ majoræ, and a glairy discharge from the vagina, with a sensation of weight in the rectal region.

Some women, however, have none of these warning signs, and are surprised suddenly while walking, or making a visit, by the uterine contractions.

Uterine contractions should not be confounded with the pains; these latter may be, and are, often wanting.

The contractions of the uterus cause the pains, it is true, but the two terms are not synonymous, for contractions may take place without pains.

Uterine contraction exists long before labor commences, and, in fact, during the entire duration of pregnancy there are contractions of the organ; it would seem that the uterus essays, as it were, the muscular labor it will be obliged to perform at the end of pregnancy.

The contractions do not present the same character during the different periods of labor; weak and far apart at the commencement, they become later on more frequent and of greater intensity. They occur at first every three or four minutes; and often succeed each other after intervals of four minutes, with almost chronometric regularity.

During the entire period the os is dilating, you may expect a certain regularity in the uterine contractions.

I speak, of course, of the generality of cases: this rule meets with many exceptions. In order to be regular, the contractions of the womb should be entirely and completely intermittent, and be reproduced at almost regular intervals; they should have a certain duration, but not be too prolonged.

Sometimes the contractions of the uterus are permanent and tetanic, oftenest under the influence of ergot, but also occurring sometimes spontaneously without any medicament having been administered. Such eventualities are dangerous, because the contraction diminishes the uterine circulation, contracting the vessels, and thus injures the nutrition of the fœtus through disturbance of the placental respiration. It is thus that the death of the child ensues often after the administration of ergot; and I consider that death is better explained by this mechanism than by the oft repeated hypothesis that death is due to the exaggerated compression of the fœtus by the strongly contracted uterus.

We should observe, in passing, that there are certain means by which this permanent uterine contracture or tetany may be diminished. I have caused it to disappear by bleeding, when the general condition of the woman permitted it. When such is not the case, recourse may be had to prolonged baths, to emollient injections into the vagina with belladonna, and to applications over the abdomen of unguents containing belladonna.

The contractions are not all of equal intensity; if the hand is retained on the abdomen, you will feel that the uterus is not always equally hard during the pains. The women themselves perceive this very well, and will often say: "this is but a little pain, the next will be a great one." In effect, the lesser and greater pains seem frequently to alternate.

You will sometimes observe a slackening, or even a veritable suspension, in the progress of labor; the woman, fatigued by the pains which commenced early in the evening, falls asleep toward morning, and the uterus does not again become active until five, ten, or fifteen hours later. This somnolence is not of gravity when there is no other complication.

The arrest of labor is often caused by any great mental excitement. It is thirty-five years since Dubois, in this amphitheatre, proved such to be the case. A woman was in labor; the students were called to the room, and entered in haste, and with much noise; the woman, who had never before seen the students, was very much surprised, and the pains ceased immediately. The professor called the attention of the pupils to this interesting fact, and desired them to return to the lecture room. In a quarter of an hour the pains reappeared. Dubois sent for the students a second time, and their presence again arrested the uterine contractions, which did not reappear until they had again departed.

We have often repeated, without desiring it, the same experiment, and have often observed the same result.

In private practice, labor is often retarded or arrested by the presence of some person more or less obnoxious to the patient; do not hesitate to send from the room, under some pretext, the aunt or mother in-law, or any person not desired by the woman in labor.

Labor takes on a different physiognomy according to the presentation, and the position even has its influence. The nature of the pains is not the same in an occipito-posterior position, in which they are more enervating, fatiguing, and more localized in the lumbo-renal region, than in the occipito-anterior position.

A shoulder presentation has not either the same pains as a head or breech presentation.

Uterine contractions are also modified by the state of the uterine muscles; if they are inflamed, or there has been anterior metritis, if the organ has scattered in it small fibrous bodies, the contractions will be irregular and less efficacious. If the uterine myomata were pediculated instead of being contained in the substance of the organ, they would not have the same influence.

I have, however, seen a woman who had a fibroid tumor in the anterior parietes of the uterus, about as large as a nut. It became pediculated later on, but presented nothing extraordinary; during pregnancy it increased considerably in size, and then again, after labor, returned to its primitive volume.

During uterine contraction the woman suffers pain; we cannot well judge of the intensity of the pain except from the statement she makes.

Or, tolerance of pain is very variable in different patients; many women are exceedingly courageous, and the tightly drawn lips, the interruption of a phrase, will alone show that they are suffering; on the other hand, many women express their sufferings with much more vivacity and even violence.

This depends much on the impressionability of the woman, her education and her manner of life. Some seem to become almost insane, shriek as if they were undergoing some terrible operation, seize the clothes, or the hair, or the beard of the physician who attends them, and sometimes use reproaches in expressions one is astonished to hear them utter. One day I was attending a young lady of one of our best families, in labor, who was crying out loud enough to arouse the neighborhood. I tried several times to quiet her, when, finally, she yelled out an oath and desired to be left alone.

In such desperate cases we possess some means of calming the patient and attenuating the pain. Long ago, in 1842, Chailly-Honoré, then chef de clinique in the service of Dubois, published a memoir on the attenuation of the pains by chloroform. Although I am not a partisan of the systematic use of chloroform in labor, I employ it from time to time, and consider that it may render great service in cases that I have mentioned.

The character of the pains will alone often enable you to determine to what period the dilatation of the os has advanced; the pains are much stronger when dilatation commences, and the women seem to suffer much more than toward the close of labor. The first pains, those which prepare, as has been said, complete dilatation, are most severe.

If you hear a woman complaining continually, crying out, etc., you may be sure that dilatation is not complete.

Later, on the contrary, the pain seems to be rather an effort, the woman feels the desire to

expel something; the pains are more effective, and she is conscious that they accomplish something; in such cases dilatation is taking place and labor proceeds normally.

Where is the seat of the pain? Authors differ; some have placed it at the cervix, others in the body of the womb, others, again, in the nerves of the pelvic excavation. A midwife, Mme. Boivin, who had herself borne children and whose affirmation should be of value, thought that the pain was in the cervix.

Other women will tell you that it is in the lumbar region, others, in the abdomen or about the waist. It is also certainly incontestable that the presentation and position have an influence on the location of the pain.

The cervix of the uterus is modified during labor, and varies at the different periods. The first thing observed is the effacement of the cervix, which proceeds from above downward, the internal orifice disappearing first. I cannot understand how this fact can have been contested since the work of Stoltz, in 1826, and the researches of Dubois, in this service. Little by little the cervix opens from above, and its cavity becomes confounded with that of the uterus, so that there remains nothing but the external orifice of the cervix, forming a small opening. When speaking of dilatation, then, dilatation of the external orifice is understood, rather than dilatation of the entire cervix. The number of uterine contractions necessary to produce dilatation is very variable. Women are sometimes met with who have the cervix effaced and dilated as large as a silver dollar, after two or three pains; you know, also, that in women who have borne several children, a first pain effaces the cervix, and a few others very soon dilate it after a short arrest. But the ordinary duration of dilatation of the cervix in primiparæ is ten or twelve hours; it varies from one half-hour to three or four hours in pluriparæ; which will not, however, prevent your meeting with women who require twenty-five hours for complete dilatation of the os on a second labor, which was brought about in ten hours in an anterior labor.

The external orifice assumes different forms as it dilates; it is at first a small round hole with very thin borders, particularly in primiparæ; but when it has attained the diameter of a silver quarter, the borders or edges are thicker, particularly anteriorly. The orifice may be, for that matter, somewhat oval or irregular, particularly if any other part than the apex presents. Certain pathological conditions, tumors or cancers, notably hinder dilatation of the cervix.

As soon as the orifice is slightly dilated, the "bag of waters" is formed, under the influence of the uterine contractions which push down the membranes. This pouch cannot at first be felt, except during a pain; after the contraction the water therein contained returns to its primitive position. In other cases the bag of waters, from the debut, remains exterior to the os; the membranes having, perhaps, lost their elasticity; when the fœtus is dead, it would seem that they close up less completely the orifice of the cervix; the same obtains in mal-conformations of the pelvis, and in abnormal presentations.

Often it may be seen through the membranes whether the liquid is transparent; if the pouch is violet or black it contains blood or meconium mixed with the amniotic liquid, which proves that the child has been dead some time. A yellowish tinge denotes the presence of meconium, which is abnormal.

In some cases the pouch is long and narrow (poche en boudin); in other cases, on the contrary, the bag is flat and cannot be easily felt (poches plates). I should wish to say that I have never sought for the "bag of waters" without finding it. I have always distinguished the liquid between the finger tip and the fœtal parts, even if the liquid layer was but two or three millimeters in thickness; it is in such cases indispensable to touch during the uterine contraction.

It happens frequently that the bag of waters does not rupture, although dilatation may be complete; in such a case it is necessary to rupture the membranes in order not to lose time in efforts and futile contractions. There is no danger in doing this when dilatation is complete.

Whether rupture has taken place spontaneously, often suddenly, and sometimes without appreciable pains, or whether it has been provoked artificially, the liquid does not escape in totality; a small quantity remains, and is prevented from escaping by the head when it occupies the orifice. Sometimes the membranes rupture when the woman is not in labor, and the cervix has undergone no modification. These "dry births" are the source of much anxiety; but it is rare that much liquid escapes, and it suffices in general to wait for natural labor to declare itself.

And in many cases, although the woman felt no pain at the moment the waters broke, when an examination is made the cervix will be found already considerably dilated.

You will frequently be called in a great hurry,

at night, to a woman, who, although not yet in labor, has been awakened suddenly by a flow of liquid. This is due in general to the rupture of the bag of waters and the flow of the amniotic liquid, which may happen, as I have already said, before the pains of labor have come on. There are uterine contractions of which the woman is unconscious, and which sometimes suffice to provoke the rupture of the membranes, before the cervix is effaced, or the os dilated. Do not be led away in the belief that dilatation has taken place because the waters have "come away." At the debut of the dilatation of the cervix its borders are very thin and hardly to be felt; sometimes the small depression of the external orifice is distinguished with great difficulty. In such cases the os is sometimes thought to be effaced, and the forceps even has been applied under such conditions. To be well assured concerning the degree of dilatation it is necessary to define the orifice with the pulp of the finger, and even introduce the extremity of the finger between the borders of the external orifice of the os and the part of the fœtus which presents whether the membranes be, or be not ruptured.

When even the amniotic liquid escapes prematurely, labor follows its regular course; but it is necessary to determine whether the escaped liquid be in reality amniotic liquid. Women may have a liquid flow when the membranes are not at all ruptured; what is called hydrorrhœa often occurs when the contents of the uterus become detached from certain points of its cavity. If the liquid is troubled, containing small white masses, constituted by sebaceous debris from the skin of the fœtus, this suffices to prove that it was in direct contact with the child, and consequently that the liquid was contained in the amnios.

There is also from the vagina a glairy discharge, more sticky than white of egg, which adheres to the finger of the accoucheur, and hardens on the linen; these mucous discharges come from the uterine cervix, and are the product of the series of glands in the cervix which can be easily perceived with the naked eye in pregnant females, for they are notably hypertrophied in this state. This glairy liquid will be felt, and will become adherent to the finger during a vaginal examination, and there will be a spontaneous discharge if the liquid is abundant.

This liquid is not always of the same color; sometimes it is mixed with a small quantity of blood, the exhalation of which appears intimately connected with this glandular production; sometimes, then, the liquid is rose colored or even red.

Under other circumstances this liquid is yellow or of a yellowish-green tinge, which makes it resemble meconium; but the child has not passed any, or it would be contained in the amniotic liquid and would follow the finger after vaginal examination.

It is not natural for the woman to lose blood at this period of labor; no blood should be seen unless it comes from some slight tear of the cervix; in such case there is but a few insignifiant drops of blood lost.

If any flow of blood meriting attention should supervene, it would be necessary immediately to seek whence it proceeded.

It is generally due, at this stage of labor, to partial separation of the placenta, oftenest because the cord is too short. As the head descends toward the floor of the pelvis it extends the cord, which in its turn draws on the placenta, which thus becomes partly detached from its insertions.

I recall the case of a young woman whose labor appeared normal until, perhaps, about three spoonfuls of blood were suddenly discharged. I immediately sought if all was well in the uterine cavity. I auscultated and found the heart-beats of the fœtus troubled and irregular. It was evident that the child suffered; it became dangerous to wait for the natural termination of labor, which might last two or three hours. Dilatation was complete. I convinced the young patient of the necessity for action, and applied the forceps. As soon as the child was extracted, five or six enormous clots, weighing about two pounds, were expelled from the vagina. The placenta had become detached, and without my intervention the child most certainly would have succumbed. He came into the world respiring badly, but by proper care he soon breathed freely.

You should, then, whenever any bloody discharge supervenes during labor, assure yourself by auscultation concerning the state of the child, and if it is necessary, and dilatation is sufficiently advanced, hasten to intervene, when the life of the child is in danger.

The vital parts.—Lady, anxious to reach the station—"Cahn't you drive a little fahster? We'll miss the train if you don't 'urry." Cabman whips up 'is 'orse, but doesn't seem to get on much "fahster." Lady, again—Cahn't you 'urry the 'orse a bit? 'It 'im in some wital part, vy don't ye?" Cabman—"'It 'im in some wital part? Vy, mum. Hi've halready 'it 'im in all his wital parts hexcept one, and Hi'm reserving that for 'Olborn'Ill!"—*London Fun.*

COMMUNICATIONS.

WOUNDS OF THE HEAD.

BY GEORGE HALSTED BOYLAND, A.M., M.D.,
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The consideration of wounds of the head is relatively of more importance than that of wounds of other parts of the body, because the danger is ever present that the consecutive inflammation may spread to the meninges, or brain itself. We must then, as regards prognosis, be very cautious, even with the most trivial wound of the head. In every case of wound of the head, the whole region should be closely inspected and felt over, as considerable wounding of deeper parts and at some distance from the spot where the blow appears to have been inflicted, may exist. Wounds from cuts are the least dangerous of all wounds of the head; such wounds have a flap, and are oftenest complicated with bleeding. The ligature is seldom necessary, and quite difficult, as the arteries running in the skin, of a thick, leather-like tissue, cannot be isolated. To arrest hemorrhage in such cases, compression is preferable to cauterization. Compression should be exercised, and not on the wound itself, but along the course of the artery, as tamponing the wound favors the development of inflammation. The suture often serves as an excellent means of stopping bleeding, it must not go too deep though (into the galea), and should be employed while the wound is fresh; and afterwards inflammation must be guarded against by avoiding irritation of the wound and excitement generally.

Low diet and cold compresses on the wound should be ordered, and the bowels regulated.

Wounds from *sticking instruments* generally undermine the tissue, run in a slanting direction, and may cause the bleeding to be a source of anxiety to the practitioner, until he finds the source of it by incising the wound more freely, when necessary.

Erysipelas often follows wounds of this character. The foreign bodies found sometimes in these wounds are partially to blame for this, but still more, doubtless, the bruising, or crushing, upon which also the considerable pain depends. By foreign bodies are meant, for instance, points of knives, bits of stone, sand, etc. It is often very difficult to ascertain the direction and length of a wound made by sticking, or pointed instruments; therefore, it is better to confine exploration with the finger and sound to those cases in which it is reasonable to accept that the bone is injured, or that a foreign body is within. The prognosis is less favorable on account of complications, such as bruises, contusions, foreign bodies, and bleeding from deep parts; moreover, they are more serious on account of the erysipelas that follows. The *treatment* is to first remove the foreign body and then to still the bleeding. To accomplish both ends, splitting the wound canal is often the best means. This should not be delayed, and may be fearlessly employed in all cases of this type in which it is impossible to carry out the indication by milder means. It is better to do this very early in the pathological process, as the splitting may become necessary under any circumstances in a few days, on account of the intensity of the inflammation, especially in wounds from sharp-pointed instruments penetrating to the galea. Another reason for employing this procedure is the severe pain, which is increased greatly by the tension of the inflamed parts.

Contusions, or *wounds by crushing* of the external soft parts of the head are sometimes linear in shape; at others with flaps; again, we have wounds with loss of substance. Linear wounds of this kind are caused principally by striking with a blunt object, or by a fall against such an object. They reach often the pericranium, and sometimes pass through it.

The well-known appearance of a contusion, with its dark blue color and swelling, is too familiar to need further comment. In contused wounds with borders, these borders show plainly the different degrees of contusion. If the working of the outward force took place with great rapidity, all the appearances of contusion may be wanting. In such cases the treatment of clean, simple wounds is indicated. When real contusion of the edges of the wound is present, an occlusive bandage should be employed, the pains and too great tendency to inflammation should be kept down by cold compresses, and the granulation stage conducted later, according to the general rules. Contused flap wounds I have known to be quite frequent. The flaps themselves present different degrees of contusion; it is the duty of the practitioner to essay their union, nevertheless, no matter how unfavorable the appearances may be at first sight, as regards healing on again. The less contused parts of the flap often heal per primam, while more severely bruised parts suppurate, and those that are considerably broken down die off. But as in the first stage after a wound has been inflicted it is impossible to judge, *a priori*, of the degree of contusion of a flap, and to determine the vitality of certain points, we should treat them all as if the probability of a

direct union existed still. By this means harm is never done, and much good is often accomplished.

It is not advisable to push charpie or wads of other material under the flap, for the simple reason that the inflammation will only be increased by such foreign bodies. In no case ought we, however considerable the contusion of a flap may be, to remove it at once and in its entirety. Contused wounds call forth oftenest a reaction that passes the bounds of what is styled adhesive inflammation, and give rise to pus channels that must soon be opened. This is the right place for counter openings, which are best made at the base of the flap, and should correspond as to size with the size of the *pus channels*, a due regard to the quantity of pus to be emptied being also had. A considerable suppuration may always be expected when parts of the flap mortify. The more intense the inflammation, the more considerable and deeper the suppuration, the greater is the danger, by means of local spread, of meningitis, and in the more advanced course, of pyæmia. Just for these reasons an exact reunion of the parts is doubly necessary, because also the wound surface is thereby diminished and protection is guaranteed against the harmful influences of the air. All hope of a union per primam, at least of a partial one, need not necessarily be given up, even if some time (up to twenty-four hours) has elapsed since the wound was received. The difficulty of bandaging is then greater, because the borders of the flaps roll up and swell more and more. As for the rest, the rules that apply to bandaging and the laying on of sutures in general, hold good here. The application of ice is seldom necessary on account of the wound itself, but may be indicated by the condition of the brain. Every practitioner will be on the lookout for cerebral symptoms in all cases of wounds of the head; not existing at first, they may develop themselves shortly, although wounds of this kind very frequently run their course without them.

Tearing up the periosteum [pericranium], which sometimes takes place in contused wounds with flaps, demands especial attention. In favorable cases the piece of periosteum loosened remains unchanged on the inner side of the skin flap; in unfavorable ones it is lost with the other soft parts. In the first case the pericranium can heal on by primam intentionem, especially when the atmospheric air is shut out from the wound by bringing the edges into close union. This can even take place when the wound is not dressed for some hours after being made.* In other circumstances healing takes place by suppuration and granulation, sometimes with sometimes without *necrosis of the exposed* portion of bone. Necrosis is here best prevented by keeping the bone moist. If also, at any given point, the blood vessels running from the pericranium into the outer bone table are torn off, the nutrition of the bone is not necessarily stopped, as many anastomoses exist in the bone itself. But if the outer air is allowed to get to the bone for a long time, drying up and shrinking of the blood vessels that empty outwardly causes interruption of the circulation and consequent necrosis. Necrosis is unavoidable when with tearing up the periosteum, the vessels running into the outer table are not simply torn off, but are pulled out to some extent from the bone. The *treatment* then must have for its object to cover as rapidly and completely as possible the exposed portion of bone, and in cases of loss of substance of soft parts, to shut out the air by moist compresses.

* Desault.

The ordinary contusion without cut or flap is quite readily diagnosed, even by laymen. The circumscribed extravasation of blood caused by a blow or fall, whether situated in the subcutaneous tissue or subaponeurotic tissue, between the galea and pericranium, or between pericranium and the bone, demands much the same treatment. Generally such contusions are of minor importance, provided that symptoms of concussion (commotio cerebri), are wanting. It is best in this case even not to leave them entirely to themselves. As the blood cannot spread itself far in the very thick tissue, much difficulty is thrown in the way of resorption; a part of the coagulum may thus remain unabsorbed or may be decomposed by suppuration.

Treatment.—It is not to be denied that such contusions will disappear without treatment, but much can be done to aid nature and abridge the period of inconvenience to the patient. Often cold or so-called discutient bandages, with a moderate amount of compression, are sufficient to bring about resorption. Sometimes, however, these contusions are so considerable that compression is either inadequate, or too painful; in these cases leeches, or an incision with the scalpel, is indicated. Incision is, nevertheless, only to be employed when all hope of resorption has vanished, as resorption takes place often quite unexpectedly.

In these cases the contusion loses in size, and alters its form and color by becoming more flat, and changing its dark color for a yellowish tint. If resorption does not take place at all, and the quantity of extravasated

blood is considerable, inflammation may take place, and the more easy on this account, because the production of such extravasation naturally presupposes a considerable mashing of the soft parts.

Under such circumstances we must decide upon making an opening with the knife, and one of sufficient length to allow the blood to flow freely. In my own practice, I have rarely found this plan to fail. In some cases of contusion with abrasion of the skin, better and quicker results have been obtained. In these the more rapid disappearance of the contusion is due to the loss of blood and to the fact of the abrasion acting as a counter-irritant, without incision and with absorbent cotton dressing.

Fracture of the Cranium.

My definition of the term fracture of the cranium, being comprehensive and practical, embraces all wounds of the cranium in which the bone itself is either broken or penetrated, as for instance, by a bullet, or in which a piece or pieces of the bone are broken or split off in any manner by blows, falls, etc.

According as the wounding instrument comes with greater or less power more or less directly upon the bones of the cranium, it produces different kinds of disturbances in the continuity. Sometimes it leaves only a trace (hedra); or the bone may be perpendicularly split, and in its entire thickness (eccope); or it makes an oblique split like a flap wound of the bone (diacope); or finally a part of the vault of the head is entirely split off, so that it is either perfectly separated or remains attached only to the soft parts (aposkeparnismos). The *diagnosis* of wounds of the bone of the cranium is in general not particularly difficult, as the severing of the skin in its continuity at the same moment makes the examination more easy; but it is difficult to ascertain exactly the depth, the degree of contusion of the bone and the not unfrequent complications. If the wound penetrated or not, cannot always be fixed by the very cautious employment of the sound, and especially in narrow splits, how far splits and offshoots of fractures extend in the bone remains quite unknown. No matter how straight the instrument came into contact with the bone, nor how sharp its point or edge was, if the blow or other force was powerful, there is probability of a fracture or disunion in a suture, or sutures. From the corner of the wound a flaw or crack may run out unnoticed for some distance, and really a part of the inner table be sprung off. Only in the very rarest cases (in perfectly clean cut linear wounds from blows), does healing per primam follow; generally, under otherwise probable conditions, suppuration takes place and the wound-gap, when considerable, is only filled up by a fibrous scar that remains easily recognizable as an impression, or more properly, sulcus of corresponding depth between the rounded off and thickened edges of the bone. According as these were contused, or splintered, follows in general necrosis.

Prognosis.—All these conditions make the prognosis less favorable; for in the first place, they prove that the power of the wounding force did not and does not exhaust itself with the infliction of the wound; wherefore, we can always count upon more or less accompanying concussion or contusion of the brain, or at least, of the meninges; and, secondly, as a fracture of the bone has more uneven edges than a wound of the bone, there remains the probability of a consecutive inflammation within the cranial vault, and, therefore, on account of this, the greater danger. This is gravely increased when the inner table is splintered, as inflammation and suppuration must necessarily follow around that part of the bone. Nevertheless, we sometimes meet with wounds of the bones of the cranium without fracture, and accompanied by very slight commotio cerebri; these wounds are generally by sabre blows, especially when handled in the manner in vogue among the Arabs and Mamelukes; we know the rapidity with which the Damascus blades of the Orientals decapitate, partly by a pressing, partly by a sawing motion. When, therefore, the blade is not too thick or heavy, when it is handled in the manner of the Orientals, that is, so as to make a true, clean cut, a wound of the bone may be made without fracture at the same time, and by means of a suitable bandage the life of the patient may be saved. In these cases the weapon cuts into the bone as a knife into an apple. Examples of healing of such extensive wounds of the bones of the cranium, with accompanying exposure of the dura mater, and even of the brain, are not so very seldom. One example:* During the days of July, 1830, a citizen of Paris, believing himself followed by fifty individuals, had the madness to force his way through a squadron. The cavalry hacked his head into many flaps; one blow opened the cranium and exposed the dura mater. The wounded man was still able to find his way into a neighboring house, where his head was bandaged. Later, he recovered entirely at the Beaujon Hospital. Dupuytren ex-

* *Leçons Orales de Clinique Chirurgicale.* Dupuytren, tome VI, page 148.

hibited him in his clinic in 1831, that is, one year after the wounding.

Treatment.—From a therapeutical point of view we may, with Bruns, make the following technical distinctions upon which to found our practical treatment:—

(1) Clean cut wounds from blows that do not gap, are to be reunited and treated in the same manner as if no wound of the bone was made.

(2) Gaping wounds from blows, to which class belong also all flap wounds (if we may so speak), of the bones of the head, should never be reunited on the surface, because they always heal only by suppuration, and furthermore collections of pus may form in the deeper parts, or penetrating wounds between the cranium and dura mater. They must be treated from the very first with moist compresses with the utmost possible protection from the air.

(3) If a simple split wound of the outer table is found, while the cautiously introduced sound discovers a splintering or detachment of a portion of the inner table, the removal of such detached piece of bone, which would otherwise act as a foreign body, becomes necessary. In order to accomplish this the bone wound must be enlarged. This may sometimes be accomplished by means of an ordinary saw; in most cases, however, the trephine is the most suitable instrument for this purpose. In using it the regular cross cut should be made through the scalp, unless there was a wound already, as in the case under consideration; this should then be made of such sufficient size as to admit the trephine freely, which should be applied and bored slowly and cautiously, with its auger-like motion, through the bone—the round piece is then lifted out with the elevator. In abscess within the cranium the pus will then flow out, and in cases such as are now being discussed, the irritating portion of bone is removed. The trephine leaves a round hole in the cranial bone, corresponding exactly in size with the diameter of the crown used; this aperture fills out by fibrous shoots and granulations from the bone edges and dura mater, leaving a depression and weak spot, through which patients can hear. To protect this place metallic plates of gold or silver were formerly used; those of leather and gutta percha are considered better by some. Trephining is always an exceedingly grave operation and brings the life of the patient into danger. Although large portions of the cranium have been removed by the trephine and the patients have recovered, trephining, for the general practitioner, can only be a last resort.

Notwithstanding the above, trephining is indicated in the particular kind of fracture of the cranium described under (3).

(4) The examination discovers only a simple split wound in the cranium. But the power with which the wounding force worked causes fear that a portion of the inner table is sprung off. We must not, therefore, necessarily employ the trephine forthwith, but so conduct our treatment as though the inner table remained whole; in the first place, we are not sure, and then the probability that the inner table is not shattered by such a blow, is as great, if not greater, than the probability of a fortunate result from trephining unnecessarily. If cases present themselves which demonstrate, from the symptoms, that inflammation or extravasation exist under the cranial bone in the neighborhood of the wound, and these cannot be at once reduced by antiphlogistic treatment, it is our duty—even with but little hope of success—to trephine. The richer in diploë the portion of cranial bone wounded is, the greater the probability that the force of the blow did *not* extend into the inner table.

(5) Wounds from blows splintering both tables are to be considered and treated as comminuted fractures, that is, they demand especially the entire removal of all loose fragments of bone, to which end the widening of the wound already existing in the outer table is often necessary.

(6) If the portion of cranial bone loosened by aposkeparnismos still hangs together with the flap of the soft parts, there is a better prospect of success when we remove entirely such piece of bone and reunite the soft parts only, than when we attempt to heal in also the portion of bone with the rest. It would be very much to be desired were we able to close again completely the cranial bone, and, in fact, several observations are on record in which the healing on of portions of bone broken off succeeded; but the danger of necrosis of the same is too great to warrant such an attempt. Before bandaging, which is best done with the regular roller bandage, the edges of the hole in the bone ought to be carefully smoothed with the instrument and every splinter removed.

(7) If with the separated portion of bone the soft parts covering it are also hacked off, nothing then remains to be done but to carefully smooth the edges of the bone, clean the wound, lay on compresses moist with cool water, and apply a roller bandage, without exercising much pressure.

As regards the *treatment of separation of the sutures*, it must necessarily be directed against

existing complications. As mechanical interference is not indicated, an incision, for the presumable purpose of obtaining a more precise diagnosis, which is certainly very difficult when no wound exists, should never be thought of. Rest and attention to the bowels in cases of simple separation of the sutures are all that can be done, if we include a few small doses of calomel and cold applications. Concussion always accompanies separation of the sutures; often a more severe wounding of the brain is present. Upon this and its consequences rests the danger.

Compression of the brain from abscess, or formation of the cranial bones, or tumors, or other cause, if all antiphlogistic and alterative means fail, demands relief by the trephine. The row of symptoms called forth should be sharply distinguished from a differential diagnostic point of view, from those of commotio cerebri. The following table will be of service in determining exactly what the nature of such a case may be:—

CONCUSSION.	COMPRESSION.
Its working or effect takes place quickly, and over considerable extent; therefore, sudden prostration of the entire nervous system, to a greater or less degree.	Compression takes place gradually; its effects appear first some time after the cause. The paralysis attacks that side of the body whose nerves have their roots in the compressed part, preferably a limb, or one side of the body.
As the cause of *concussion* works quickly and transitorily, its *effect* is most intense at first, and becomes gradually less. Concussion produces suddenly a deep sleep that gradually disappears, taking away with it the remembrance of its cause; as it happens that the patients, when they awake again, have no recollection of the accident in question. Waking in concussion follows spontaneously, as the cause of the sleep is removed; nothing weighs, so to speak, upon the eyelids; they open themselves of their own accord.	The cause of compression works continuously, gradually increasing, or remains stationary at a certain point. It is the same with its effects; at first but slightly apparent, they become by degrees stronger. When the compression is extended, there is at first a slight stupor, a flighty sleep that at last becomes as deep as that which marks the beginning of concussion. It is, however, neither a soft sleep nor a lasting one, but continually more and more interrupted by excitations; the patient at the same time strives to keep awake, but is hindered from it by the compression.
The respiration is easy, the pulse small and regular; vomiting is often observed.	The respiration is difficult, stertorous; the pulse is hard, full, irregular; vomiting does take place.

Before trephining, digitalis, iodide of potash, and blisters may be tried in compression, but they will invariably be found to afford but little relief, and that only temporarily.

Fracture of the Base of the Cranium.—The symptoms that will assist us in making a diagnosis of fracture of the basis cranii (a condition of exceedingly rare occurrence, if we exclude gunshot wounds), are briefly as follows:—

(1) Bleedings from the nose, the pharnyx and external ear, of such force and duration that they cannot be attributed to the simple concussion.

(2) Suggillations (ecchymoses) in the region of the basis cranii; these appear during the first days, at a point which the wounding force did not reach—in the eyelids and conjunctiva bulbi.

(3) Of great importance is the so-called serous exudation from the external ear. The chemical composition corresponds somewhat with that of the cerebro-spinal fluid, and in almost all cases where the autopsy has been carefully made the local conditions of the wound prove themselves favorable for its outlet. The prognosis is always grave. Besides the concussion and wounding of brain substance usually accompanying fractures of the basis cranii, the dangers of pyæmia from suppuration of the bone, and of the inflammation spreading from the place of fracture to the meninges and brain, are to be feared.

Treatment.—Rest and keeping the head in such a position as will insure the most probability of the fractured pieces being in contact. All bodily or mental exertion must be avoided, low and restricted diet, with gentle purgatives, in order to prevent congestion to the head. Cold applications may be used cautiously, as by a too indiscriminate use of ice the reproduction at the point of fracture is hindered and necrosis caused. For the same reasons calomel and venesection should be very leniently resorted to, even when necessary. The use of the trephine may be indicated when the fracture causes brain trouble, and does not gap sufficiently to allow the pus to flow out of the depth.

Caries, exostoses, and tumors generally demand removal. It is never to be forgotten that in any dyscrasic tendency, much good may be derived from the exhibition of internal remedies; alteratives and tonics principally. This is especially advantageous in caries, which is easily distinguished from necrosis by its characteristic moisture, due to the fact that the bone still lives; while in necrosis it is dead, and consequently dry. If the affection is superficial the periosteum becomes fungoid and suppurates, the corresponding bone surface is rough, and hollows itself into

cavities resembling superficial erosions. Caries is a mode of termination of osteitis. If the affection has commenced in the thick part of the bone, that tissue becomes softer and softer, and takes a yellowish and brownish tint; the centre of softening is infiltrated with sanious pus, with a dirty gray ichor, that has a rancid and fetid odor; the bone becomes friable and porous, and there are formed on it anfractuosities that separate the osseous lamellæ, interspersed with grayish red fungosities, soft and bloody. Caries can heal spontaneously on organic change taking place, but it usually demands surgical assistance. If it is superficial, the pockets where pus is amassed ought to be freely opened, in order to discover the carious portion. We may then try (if there is no longer any irritation), baths and douches of alkaline, ferruginous, hydrosulphurous, and iodous waters; dressings with charpie dipped in the essential oils of turpentine, myrrh, aloes. Cauterization transforms caries into necrosis. If the bone becomes so carious as to resist all treatment, the only thing that remains to be done is to resect or trephine.

Hospital Reports.

JEFFERSON MEDICAL COLLEGE HOSPITAL.

Surgical Clinic of Dr. Samuel W. Gross, Surgeon to the Philadelphia and the Jefferson Medical College Hospital.

Reported for the Medical and Surgical Reporter by Norman H. Chapman, M.D., Kansas City, Mo.

I intended to have two important and very interesting cases to bring before you to-day for operation, but as sometimes happens upon occasions like this, when we place too much confidence in individual cases, the patients disappear. It has so happened to day. The hour will not be without profit, however, for I shall show you a number of minor cases, such as will be among the first and most frequent cases in private practice. I will not detain each case long, but give you the points in reference to their nature and history which may be the most interesting and important.

Subcutaneous Ulcer Following an Operation for Fistula in Ano.

This man, a German (evidently about forty years of age), has some trouble about the anus. Upon questioning, he gives the ordinary history of acute abscess having formed in the ischio-rectal fossa, and of its subsequently having burst externally, discharging its contents alongside of the anal opening. He also tells us that he was afterwards subjected to an operation by cutting, which for a time seemed to have cured the fistulous track, but the old trouble, or rather a new one, seems to have returned, and he is at present annoyed with a discharge as well as with pain in the lower bowel while at stool.

Upon examination, I find a small opening at a distance of about eight lines to the right of the anal aperture, into which the point of a probe will enter. When this probe is passed well in, it can be swept about under the skin, and over towards the coccyx to a considerable extent. A cicatrized wound is also to be observed upon the right side, which shows that the fistulous track has been laid open, and subsequently allowed to heal. It will be noticed, too, that the opening into which the probe has entered is just above the margin of the upper part of the cicatrix. Observe also, that there are at present no symptoms of acute inflammation. Now, what have we? A subcutaneous ulcer which communicates with the atmosphere by a small opening, and not at all with the bowel. The surface of this ulcer is covered by a pseudo or false mucous membrane, from the surface of which is constantly being poured out a thin, ichorous and offensive discharge.

If this subcutaneous ulcer were allowed to remain as it is, it would go on *slowly increasing in size* for months and years, without the slightest attempt at resolution. Its surface is in an unhealthy condition and would remain so until changed by surgical interference. The thing necessary to be done in order to place this subcutaneous ulcer in a condition which will allow the parts to heal, is to divide the overlying integuments so as to convert the ulcer into an open sore. When this is done, resolution will take place by the granulating process. No stimulating lotions or other applications would do this subcutaneous ulcer a particle of good; an operation is imperative.

In operating, therefore, I pass in a grooved director, slit up the tissues which cover in this subcutaneous ulcer, and thus convert it into one which is open. I also dissect off the greater portion of the false mucous membrane and thoroughly scrape the remainder of the surface of the ulcer with the handle of the knife, in order to destroy any portion of this membrane which may possibly remain. By instituting this method of percussion, and converting what was a subcutaneous into an open ulcer, the parts will heal by the granulating process from the circumference to the centre, in the same manner as in a healthy open sore.

In the after treatment the parts will be packed with lint, which has been previously imbued with Monsel's solution of the sub-sulphate of iron, and covered with a folded towel as a compress, in order to keep up a gentle pressure; and subsequently the carbolized lint dressing will be employed.

We may expect that in from two to three weeks the whole ulcer will be entirely closed, and the man able to go about his business, without any discomfort.

Acute Phlegmonous Abscess in the Anterior Triangle of the Neck.

You will observe in this young man (who is apparently about nineteen years old), a decided swelling, which takes up a large portion of the anterior triangle of the neck; that triangle

which is bounded in front by the median line of the neck, behind by the sterno-cleido-mastoid muscle, and above by the body of the lower jaw.

As to the history of this tumor, the patient says that it began two weeks ago, apparently without any assignable cause, and has continued increasing gradually in size until the present time. We observe that the overlying integument is markedly discolored, and of a dusky red appearance. He complains also of pain, of a throbbing character, which is increased at night when in the recumbent posture. Upon examining the swelling, we find that it is soft, that there is fluctuation, and that immediately over the body of the mass is felt a distinct pulsation which is synchronous with beats of the heart. Do not be led astray by this symptom of pulsation, it is merely the result of the coincident that the swelling immediately overhangs the carotid artery. This is not an aneurism, and why? The pulsation is conveyed to the swelling from below, and is distinguishable only by placing the hand over the body of the mass, but is not felt when the fingers are placed upon its opposite sides, as would be the case were the tumor an aneurism. Then, too, the aneurismal thrill is absent, and the discoloration is not that of a bloody tumor.

In all cases of this kind, no matter how certain the diagnosis may appear, before recourse is had to the knife the exploring needle should be used. The most careful observer may at times be mistaken. Some years ago a prominent surgeon in Edinburgh saw a tumor situated below Poupart's ligament, which had been diagnosed by other and equally prominent men to be aneurismal; but his opinion differed from the rest: he was confident that it contained pus. He plunged in his bistoury and found it as he had anticipated. Again, he saw a tumor in the anterior triangle of the neck, which others had also pronounced aneurismal, but which he conceived to be the same as the one first seen. He opened it and caused the almost instantaneous death of his patient, and he himself was found dead the next morning in his office, so great was the impression the case made upon him. Remember this story and never forget to use the exploring needle, it will some day reward you handsomely.

A very good way of opening an abscess in the neck is to introduce an exploring needle, and then to pass in the bistoury upon its groove. In this manner you are pretty sure not to wound important structures, while at the same time a good, free opening is unhesitatingly made. The pus should be allowed to flow by atmospheric pressure.

The discharge from this abscess (which is a large one), is quite abundant, and the amount of suppuration which will take place in the next few days will give rise to considerable constitutional weakness. We will therefore place him upon the tonics of quinine and the tincture of the chloride of iron, giving from seven to ten grains of the former, and from thirty to forty minims of the latter during the twenty-four hours. An emollient poultice will be applied, for the double purpose of keeping up a free flow of pus and of preventing the opening we have already made from closing.

External Hemorrhoids.

As I separate the buttocks of this man, you will be able to see upon the right side of the anus an external pile, or hemorrhoid. The condition is a very simple one, it is nothing more than a clot of blood, which has been thrown out under the skin among the subcutaneous cellular tissues from the rupture of a hemorrhoid vessel. It is due, in the vast majority of cases, to straining efforts while at stool, during a condition of constipation. The passage of hardened fecal matter is always irritating to these little tumors, causing them to be more or less congested and frequently acutely inflamed. They are always the source of a great deal of pain and annoyance, and frequently incapacitate a person for business, or even to walk about or sit quietly in a chair with any degree of comfort.

This little tumor has only existed since yesterday, and I can scarcely say whether it is ripe yet or not. If an external hemorrhoid is opened before it is ripe, troublesome hemorrhage is very apt to ensue. And the means necessary to control this hemorrhage would only increase the severity of the already existing condition of affairs.

What I mean by an external hemorrhoid being ripe, is that the clot should be well formed. This point can always be ascertained by carefully examining the density of the tumor. If it is firm, hard and full, like a shot or bullet, when between the fingers, it is perfectly safe to remove it; but if it is soft and easily compressible it had better be allowed to remain and ripen.

When these tumors are small and recent, the local application of the compound ointment of galls answer very nicely, but when they are older some operative procedure must be instituted. The old way of treating an external pile, by cutting it off with a pair of scissors, and then allowing the parts to heal by the granulating process, is a barbarous mode of procedure; and the new way of treating them, by the hypodermic injection of strong carbolic acid, can scarcely be any better. By far the more satisfactory plan is to lay the tumor open, turn out the clot and make local applications of lead-water and laudanum or Goulard's extract. This is what will be done in the present case.

Nasal Polyp.

This man complains of difficulty in breathing through the right side of the nose. There is a sensation of fullness in the nostril and continued blowing of the nose gives no satisfaction.

By looking in at the anterior nares, there is plainly visible a white, oyster-like mucus, or gelatinoid polyp. The greater portion of the mass has the appearance of arising from the floor of the nostril, although, at the same time, other portions of the tumor seem to spring from the turbinated bones. There would, therefore, appear to be more than one polyp. In growths of this kind there is no fixed rule as to their number. Sometimes there is only one, and at others there are several, more or less closely clustered together. Their size may vary from that of a small shot, to being sufficiently large to stop up the entire nostril. They are always more or less hydrostatic in character, and in consequence be-

come more troublesome in damp than in dry weather.

Upon close inspection the gelatinoid polyp will be found to be moist, and of a spongy consistence; to have a smooth or lobulated surface; and to be surrounded by an investing membrane which is covered with cylindrical epithelium. The mass is more or less translucent, and nearly always presents a few small, straggling vessels, which give it a striated appearance.

Its minute structure is mainly a delicate cellulo-fibrous tissue, the interspaces of which are occupied by a sero-albuminous fluid, much of which readily drains off on puncturing the investing membrane. It also generally exhibits a distinct adenoid structure, the mucous glands being increased in number and considerably enlarged. Such tumors are devoid of sensibility, and commonly occur in persons who have passed the age of forty years.

In the treatment of gelatinoid polyp, tonic and astringent lotions may be tried at first, but they seldom effect a cure. Insufflations are more satisfactory; equal parts of tannic acid and Canada snakeroot have answered very nicely when well snuffed up twice or three times a day. When the polyp is situated near the anterior nares a very satisfactory mode of treatment is to inject (hypodermically) from ten to fifteen minims of Monsel's solution of the subsulphate of iron.

The most effectual means at our command, however, is that of removal by torsion, or twisting off the tumor at its base with the forceps. The forceps to be used in this mode of procedure should be well selected, for it is not every pair that will do the work. The best forceps with which I am familiar are made with long, narrow blades which are well serrated and sufficiently long to shut firmly together for a considerable distance. In each blade of this instrument you will notice there is also a narrow oval fenestra. In removing the growth after this manner, the polyp is firmly grasped as near its base as possible, and forcibly twisted or wrenched off. If only a portion of the polyp is removed at the first attempt, repeat the procedure until the greater portion of the mass is removed. The few fragments which may remain will usually shrivel up and disappear.

Two Tumors Involving the Lymphatic Glands of the Neck—Lymphoma and Sarcoma.

The first of the two cases involving the lymphatic glands of the neck which I shall present to you, is that of William F., aged forty years, admitted to the hospital one month ago, and whose history is somewhat as follows: About one month ago he first noticed a swelling upon the right side of the neck. Since then it has increased in size at irregular intervals, with the varying condition of the atmosphere; having a tendency to swell rapidly in damp weather, and apparently remaining stationary during dry states of the atmosphere. His family history is good, there being no evidence of the existence of pulmonary or scrofulous disease, and he denies ever having had syphilis.

You will observe upon the right side of the neck a tumor which rolls about easily under the fingers, thus showing that it is not adherent to the deeper seated structures. The mass is soft; it is glandular, and is composed of the superficial lymphatic glands of the neck, which are placed along the course of the external jugular vein and rest down upon the posterior margin of the sterno-cleido-mastoideus muscle. There is also detected, by running the hand well down into the supra-clavicular region of the right side, a solitary enlarged gland. On turning the head and looking upon the left side of the neck, the corresponding glands are seen to be similarly affected. They are also soft and movable, but the enlargement is as yet only slight. Such tumors are called lymphomas, and for the reason that they are composed mainly of enlarged lymphatic glands.

The growth of the lymphoma is simple. The lymphatic glands, as you know, are contained in a capsule of fibrous tissue, and made up of a delicate, reticulate network of vascular and fibrous stroma, and filled with lymph cells. In disease, these numerous lymph cells, which are in the interstices of this delicate stroma, proliferate rapidly by division, or endogenous germination, and force the gland to enlarge.

Lymphomatous tumors may arise from a variety of causes. They may be due to a strumous condition of the constitution, which has been inherited. From this cause a lymphoma usually makes its appearance about the age of puberty, and is most frequent in very delicate constitutions. A frail, delicate boy or girl, with a thin, pale skin, light hair and complexion, is predisposed to lymphatic enlargements. It is among these children that a few years later you will most frequently find scrofulous lymphoma. Again, lymphoma very frequently occurs in subjects where the white blood corpuscles are in excess, in persons suffering from leucocythæmia. When lymphatic glands become enlarged, from the increase in number of the white blood corpuscles, there is apt to be enlargement of internal glandular organs, the spleen, the liver, and the kidneys.

Lymphoma may also arise as the result of long continued irritation, as from a carious tooth. Then there is the simple or ordinary lymphoma which arises from an unassignable cause. Why the lymphatic gland should enlarge in these cases we cannot tell, we simply know that these glands are hypertrophied, and that is all. We simply know that the lymphatic cells and fibrous stroma go on rapidly increasing, but for what reason, we are unable to say. In cases where the lymphatic cells preponderate or are developed more rapidly than the fibrous stroma in which they are lodged, we get a soft fluctuating tumor which is malignant in character. In these tumors we find that the glands all around are enlarged, and that there are apt to be secondary deposits in the lungs, bones, connective tissue and the like.

Treatment.—Upon admission this man was placed upon a general tonic plan of treatment, of the tincture of the chloride of iron and quinia, with good diet and open air exercise. He was also given Fowler's solution, beginning with five drop doses and regularly increasing the amount until the toxic effect, as evidenced

by swelling of the eyelids and vomiting, was produced. German writers have great faith in arsenic when pushed to its limit, and particularly so in the malignant forms of lymphoma, but little was accomplished, however, in this case until one week ago, when the local application of the following ointment was made:—

℞. Iodoformi, ℥ iss
Extracti belladonnæ, ℥ ij
Balsami peruviani, ℥ j.
Unguenti petrolei, q.s. ad. ℥ ij. M.
Fiat in unguent.

The effect of the daily use of this ointment was most striking. In three days the tumor had diminished one-third in size, and to-day, one week from the time the ointment was first rubbed to the surface of the tumor, it is less than one-half its original size. The application of this ointment will be continued, and in addition the hypodermic injection into the substance of the gland, of five minims of Fowler's solution daily, will be advised. The progress of this case will be watched with interest on account of the marked effect of the ointment employed.

The second tumor which I shall show you today, involving the lymphatic glands of the neck, occurs in this young man, James F., from Reading, Pa., a hatter by trade, single, and twenty years of age. His history is as follows: About seven months ago the appearance of a small tumor upon the left side of the neck was first noticed. At this time the tumor was about the size of a chestnut, and there was very little pain at the seat of the growth. He tells us, however, that about two months prior to the appearance of the tumor there was great pain upon the right side of the face and forehead; that this pain came immediately after a number of very profuse hemorrhages from the nose, and that it continued severe long after the appearance of the tumor upon the left side of the neck. The size of the gland has gradually increased, until at present it is equal to that of a small orange. The redness visible over the surface of the tumor appeared two months ago, and was produced, the patient states, by the application of a plaster. This redness, however, has increased rather than diminished, since its first appearance, so that the plaster would seem to have had very little to do with the discoloration. The pain in the tumor, which was only slight at first, has of late increased very much, and is at present so severe as frequently to prevent his sleeping at all during the night. There is also history of night pains in the limbs and joints, but no history of specific disease. He has lost about twenty pounds in weight during the last six months, and his appetite is continuously poor. The hearing upon the left side is also much impaired.

Upon examination, we find a hemispherical tumor, nodulated in appearance and located to the left side of the posterior median line of the neck, and extending forward in such a manner as to encroach upon the posterior portion of the anterior triangle of the neck. It is of firm, dense consistence, and apparently movable. This movability is only apparent, however; the tumor is not circumscribed, cannot be picked up as in the other case, but is in reality firmly attached to all the surrounding tissues.

We have a number of distinct types of glandular lymphatic tumors; even the bony structures are not exempt, and the character of the one now before us is entirely different from that of the one which has just left the room. This one is a sarcoma. I know it to be sarcoma from the mode of its growth, intimate connections, character of pain and the like.

It would never do to remove this tumor, and why? From the natural history of such growths we know that they are made up mainly of connective tissue, and endothelial cells. That these cells of connective tissue type go on multiplying and developing themselves rapidly; that they advance from one structure to another through the smaller vessels, thus invading and infiltrating the surrounding parts. The veins of the neck, the nerves in connection with the chain of the brachial plexus, together with the intermediate structures, are so closely adherent, and all infiltrated with disease to such an extent, that the condition is utterly irremedial. Remember, now, that this man had characteristic pains upon the right side of the face and forehead, accompanied by ptosis, prior to the occurrence of the glandular enlargement upon the opposite side of the neck, and it would seem to me to be a sympathetic growth accompanied by a similar one in the brain. I believe the post-mortem, which must soon be made, will verify this prediction.

Editorial Department.

Periscope.

Animal Vaccination.

The *Popular Science Monthly* gives the following abstract on this subject:—

It becomes possible to affect sheep and cattle with a form of anthrax disease so mild as to bear much the same relation to the severer forms that cowpox bears to smallpox; and for this artificial affection with the mitigated disorder, Pasteur uses the term "vaccination." The question that now arises is, "Does this 'vaccination' with the mild virus afford the same protection against the action of the severe, that is imparted by cowpox vaccination against smallpox?"

To this question affirmative answers were last year obtained by Professor Greenfield, in regard to bovine animals, and by M. Touseaint in regard to sheep and dogs; the former, when "vaccinated" from rodents, and the latter from fluids "cultivated" outside the living body, after a

method devised by M. Toussaint, proving themselves incapable of being infected with any form of anthrax disease, though repeatedly inoculated with the malignant virus, and remaining free from all disorder, either constitutional or local. The same result having been obtained from experiments made by Pasteur himself, probably about the same date, with charbon virus, cultivated in the manner previously described, it was deemed expedient by one of the Provincial Agricultural Societies of France that this important discovery should be publicly demonstrated on a great scale. Accordingly, a farm and a flock of fifty sheep having been placed at M. Pasteur's disposal, he "vaccinated" twenty-five of the flock (distinguished by a perforation of their ears) with the mild virus on the 3d of May last, and repeated the operation on the 17th of the same month. The animals all passed through a slight indisposition, but at the end of the month none of them were found to have lost either fat, appetite, or liveliness. On the 31st of that month all the fifty sheep, without distinction, were inoculated with the strongest charbon virus, and M. Pasteur predicted that on the following day the twenty-five sheep inoculated for the first time would all be dead, while those protected by previous "vaccination" with the mild virus would be perfectly free from even slight indisposition. A large assemblage of agricultural authorities, cavalry officers, and veterinary surgeons having met at the field the next afternoon (June 1st), the result was found to be exactly in accordance with M. Pasteur's predictions. At two o'clock twenty-three of the "unprotected" sheep were dead; the twenty-fourth died within another hour, and the twenty-fifth an hour afterward. But the twenty-five "vaccinated" sheep were all in perfectly good condition; one of them, which had been designedly inoculated with an extra dose of the poison, having been slightly indisposed for a few hours, but having then recovered. The twenty-five carcases were then buried in a selected spot, with a view to the further experimental testing of the poisonous effect produced upon the grass which will grow over their graves. But the result, says the reporter of the *Times* (June 2d), "is already certain; and the agricultural public now know that an infallible preventive exists against the charbon poison, which is neither costly nor difficult, as a single man can inoculate a thousand sheep in a day." I have since learned that this protection is being eagerly sought by the French owners of flocks and herds; and if any severe epidemic of the same kind were to break out in this country, our own agriculturists would probably show themselves quite ready to avail themselves of it.

The Curability of Phthisis at High Altitudes.

A writer in the *Brit. Med. Jour.* says: The results claimed for the treatment of phthisis at high altitudes are of a sufficiently surprising kind. In some instances it is said that there has been an actual increase in the capacity of the chest—in the vital capacity, that is, as measured by the spirometer. This fact has been adduced as a proof of the radical nature of the "cure." Assuming the observations to be accurate (though it must be remembered that there are many difficulties surrounding the application of spirometry to practice), they are yet quite incapable of sustaining so weighty a conclusion. A chest in which a considerable degree of consolidation has occurred, but in which the disease has become temporarily quiescent, may very materially alter in shape. While the apices remain flat, or even, through cicatricial changes occurring in the lung, become more retracted, the bases may become expanded. The expansion is due to a compensatory hypertrophy, as it has been called, or, more properly, to a process of dilatation—a kind of "hypertrophic" emphysema, such as is seen in its extremest degree in one lung, in cases where the other has been permanently incapacitated by pneumothorax or pleural adhesions. It is quite conceivable that such a dilatation of the lungs, occurring over a wide area at the bases, might bring about an increase in the total vital capacity, even though some considerable portions of the apices remained unfit for use. We do not wish to prejudge the subject of the beneficial influence of high altitudes on a certain class of phthisical patients; we wish merely at this moment, when the flight of the *poitrinaires* is about to commence, to enter a protest against the too sanguine views which have been put forward. The experience of every physician will supply him with cases of phthisis in which, after a longer or shorter period of quiescence under conditions such as those to which we have above referred, a further extension of the disease has occurred with extreme rapidity in this dilated and therefore, not quite healthy lung. The artificial equilibrium which has been established is so readily disturbed, that a comparatively slight accession of disease may prove fatal in a short space of time.

On the Use of Tents and Bougies.

Dr. Edward T. Williams, writes in the Boston *Medical and Surgical Journal*, August 4th, 1881:—

The knife, in modern surgery, seems to be regarded as the panacea for every ill. It was otherwise among the ancients, who, though behind us in knowledge, often showed themselves before us in common sense. They always viewed the cutting instrument in its true light, as the surgeon's last and worst resort. The popular method of treating sinuses is a good illustration of this backward progress of surgery. We hardly hear nowadays of any way of treating a sinus except by laying it open. This leads me to speak of a simpler method which I have tried successfully a number of times—the use of tents. I speak only of simple sinuses, such as are usually treated by cutting. Take a narrow strip of sticking plaster and fold it, or roll it lengthwise between the fingers, as one rolls a slip of paper to light a lamp or cigar. Push it to the bottom of the sinus, and leave it three or four days, till it excites a healthy suppuration. Then remove the tent, bring the walls of the sinus together if necessary by a bandage or adhesive strips, and let it heal from the bottom, like a fresh wound. This acts on exactly the same principle as the knife or caustic, namely, by exciting an active

and reparative inflammation in the place of a chronic and stationary one. I do not say that it will take the place of the knife in all cases, but it certainly will in many. It is an old plan, but one that ought not to be dropped altogether out of mind. It is beyond doubt that *fistulæ in ano* have often been cured by this method, or by the seton, which acts in the same way, and that this is the real secret of the success obtained by certain empirics in the treatment of that disease.

Two special applications which I have made of the same essential principle I would like particularly to notice.

The first is the application of a *bogie à demeure* as a substitute for cauterizing or curetting the uterus in chronic endometritis. Pass in a common urethral bougie and let it remain a short time in the womb. I have never ventured to exceed five or ten minutes, but have seen it followed by a decided relief of symptoms.

The second is the same thing applied to the urethra (male) in cases of gleet and seminal emissions. Both these conditions, as it seems to me, are most frequently kept up by a kind of chronic prostatic urethritis, with probably a granular condition of the mucous membrane. The prostatic portion is super-sensitive, and sometimes bleeds a little on the passage of an instrument. The *sonde à demeure* is admirably adapted for these cases, and though perhaps less effective in a bad case than cauterization, has neither the risk nor the painfulness of that method. The principle, in all cases, is exactly the same, the substitution of an acute inflammation with a tendency to heal, for a chronic one with a tendency to persist.

The Treatment of the Vertigo of Bright's Disease.

Dr. R. Saundby says, in the *Brit. Med. Jour.*, even where we cannot hope to effect a cure of the disease itself, it is often of the greatest moment to be able to relieve a symptom which is rendering life worthless. Vertigo is not a very common symptom in chronic Bright's disease; but, though it does not receive much attention from text book writers, when it is present, it is a very serious matter to the sufferer, and often assumes a pre eminent position in his own account of himself. After trying various remedies, I have found the greatest benefit from caffeine or theine, in doses of one, two, or three grains, in pill, three times a day. The following cases are examples. S. K., aged 69, complained of severe giddiness, but proved to be a typical case of granular kidney; after taking without benefit chloride of ammonium, iodide and bromide of potassium, he was entirely relieved by caffeine in grain doses three times a day. J. W., aged 63, complained of giddiness, pain in the head, and loss of memory. The ophthalmoscopic signs were negative. The urine was of specific gravity 1.001; it contained a trace of albumen. She had frequent nocturnal micturition. She was ordered at first chloride of ammonium and digitalis; then theine in doses gradually rising to three grains, three times a day, when the vertigo was completely cured. I have notes before me of two other cases equally satisfactory.

The Effects of Ozone.

Dr. Barlow, in a recent work upon the effects of ozone on the animal economy, has not arrived at the same conclusions as Ireland, Richardson, Redfern, and others. His conclusions are as follows:—

1. Ozone depresses the nervous system, an effect probably secondary, and due to the excess of carbonic acid in the blood.
2. It lowers the normal number of respirations, and diminishes the force and frequency of the heart's action.
3. Inhalation of ozonized air diminishes the normal quantity of carbonic acid eliminated and of oxygen absorbed.
4. The diminution of the number of respirations which retards the movements of the heart, and the diminution of the quantity of carbonic acid exhaled, are probably due to the action of the ozone upon the pulmonary mucous membrane.
5. The alteration of the mucus may, if the ozone inspired be in great quantity, or if the air expired contain enough carbonic acid, induce death in an hour, from asphyxia.
6. If the quantity of the ozone is small, the alteration in the mucous membrane does not kill by asphyxia, but death is due to bronchitis.
7. Death by bronchitis can occur after a sojourn of an hour in an atmosphere containing one per cent. of ozone.
8. Ozonized air in direct contact with the blood decolorizes the red corpuscles, arrests the amœboid movements of the leucocytes, renders visible the nuclei of the globules, and gives life to the granulations in the serum.
9. The change of color of the globules is due probably to the combination of the ozone with the hæmoglobin.

Galvanism in the Treatment of Hemorrhoids.

Dr. Q. C. Smith, of Austin, Texas, in the Nashville *Journal of Medicine and Surgery*, for September, 1881, describes as follows the method which he has found most successful in this troublesome affection:—

We use one sponge-faced electrode, applied externally, to the region where most indicated—to the hepatic region and over the abdomen, if constipation detains, or to the dorsal region if backache is present, and so on. The rectal electrode is polished metal, nickel-plated, about three inches long, three-fourths of an inch in diameter, with wooden handle. If the case is recent, or the parts ulcerated or very sensitive, we apply the positive pole to the hemorrhoids. But if the parts are not tender, and especially if the tumors are old and tough, we apply to them the negative pole. In cases of long standing, when the parts are sensitive, we begin the treatment by applying the positive pole, but so soon as the tenderness is relieved, we apply the negative pole, and thus hasten the cure, as the tumors are thereby more rapidly melted down and absorbed.

Preparatory to the application of galvanism to hemorrhoids we always direct the rectum to be well cleansed with warm tar-soap-suds. The rectal electrode should be anointed with camphorated vaseline. While treating cases of hemorrhoids with galvanism, we have often ob.

served that the attendant constipation was relieved incidentally, and the relief thus brought about was more permanent than when cathartics were used. Many cases of hemorrhoids occur in females who suffer from some ailment of the generative organs. In the treatment of such cases of hemorrhoids, we have often observed that local treatment of the generative organs was more rapidly successful when simultaneous with the use of galvanism. We never use a current unpleasantly strong to the patient, or any but the constant current. Length of seances fifteen to thirty minutes, two or three times a week. Duration of treatment to effect a thorough cure, two weeks to two months. In all cases the following ointment is a valuable adjuvant to the galvanic treatment, and more especially, if extreme tenderness or ulceration obtains:—

℞. Iodoform, in fine powder,
Ergotin,
Pow. nutgalls,
Pow. camphor, āā ʒss
Pow. opii.,
White wax,
Vaseline, āā ʒj
Cocoanut butter, ʒj. M.

A convenient and effective mode of applying this ointment to the piles, is through a glass tube, similar to a glass-tube uterine applicator, fitted with a piston.

Action of Duboisia on the Circulation.

In a memoir on this subject in the current number of the *Journal of Anatomy and Physiology*, Dr. Gibson gives the result of some researches he has recently made. Duboisia, as is well known, is obtained from duboisia myoporoides, while another species, the duboisia hopwoodii, yields the stimulant narcotic used by the Australian natives, and named pituri. The properties of duboisia, the alkaloid derived from the duboisia myoporoides, have been investigated by Mr. Tweedy and Dr. Ringer, and by Dr. Fraser, and their researches have shown that it dilates the pupil, dries the mouth, quickens the pulse, arrests perspiration, produces headache, causes drowsiness, and finally induces tetanus. The conclusions at which Dr. Gibson has arrived are: 1. That duboisia in quantities not exceeding 0.005 gram raises the arterial blood pressure without materially affecting the pulse rate. 2. In quantities not exceeding 0·05 gram it diminishes the blood pressure and lessens the pulse rate. 3. In quantities of 0·05 gram and upward it causes death, with the heart in a state of diastole. 4. Upon the heart itself duboisia has but little action, except in very large doses—*i. e.*, doses of more than 0·05 gram—and it then causes arrest of the heart in diastole. 5. Duboisia stimulates the central inhibitory mechanism. 6. The alkaloid paralyzes the peripheral inhibitory apparatus. 7. Duboisia stimulates the central vaso-motor apparatus, and causes contraction of the arterioles in small doses; in large doses it lowers the activity of the central vaso-motor mechanism and dilates the arterioles. 8. Duboisia has no influence over the sympathetic nerve.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

—We have received in the form of a reprint from the *Archives of Ophthalmology*, for Sept., 1881, a paper on Sympathetic Ophthalmia, by Dr. Julian J. Chisholm, of Baltimore, giving the history of two cases under peculiar circumstances with sequel of surgical operation.

—In a reprint from the New York *Medical Journal and Obstetrical Review*, for November, 1881, Dr. James S. Green presents his views on the treatment of chronic club-foot, and gives the history of a case successfully treated without tenotomy, by continuous extension and stretching.

—"How to use the Bromides," was the subject of a paper, read before the American Neurological Association, in June, 1881, by Dr. George M. Beard, and published in the *Journal of Nervous and Mental Diseases*, for July, a reprint of it being now before us. An abstract of this paper has already appeared in the Reporter.

——In its department, the *Alienist and Neurologist*, edited by Dr. C. H. Hughes, St. Louis, Mo., is an excellent quarterly, and is also very well adapted to the wants of the general practitioner who would keep himself acquainted with this interesting branch of his profession. The prospectus for 1882 promises increased usefulness, especially in the department of clinical neurology. The subscription price is $5.00 a year, single numbers $1.50. Address the editor, 1710 Chouteau Avenue, St. Louis.

—A new edition of "Winter and its Dangers," by Hamilton Osgood, M.D., has just been issued in paper cover, in order to meet the demand for a low-priced volume. This is one of the American Health Primers series, edited by W. W. Keen, M.D., and published by Presley Blakiston, 1012 Walnut Street, Philadelphia. Like the other works of this series it deserves a wide circulation, as it gives in popular language a large amount of valuable information relating to the hygiene of the cold season. While the price of the "American Health Primers," in cloth, remains the same as heretofore, 50 cents per volume, this new form, paper, will be sold at 30 cents per volume.

BOOK NOTICES.

The Physician's Daily Pocket Record, comprising a Visiting List, many Useful Memoranda, Tables, etc. By S. W. Butler, M.D. Sixteenth Year. New and thoroughly Revised Stereo-

type Edition, with Metric Posological Table, etc. Edited by D. G. Brinton, M.D., Philadelphia. Published at the office of THE MEDICAL AND SURGICAL REPORTER, 115 South Seventh Street. 1882. Price: Arranged for Seventy Patients, $2.00; for thirty-five Patients, $1.50.

In entering upon the sixteenth year of its existence, the Pocket Record lays aside its plain dress and comes out in entirely new and gorgeous attire. Its general appearance, which always has been neat and elegant, will now be pronounced exquisite. It is printed on much finer and in every respect superior paper than heretofore, so that the thickness and bulkiness of the seventy patient Record is now not much greater than that arranged for thirty-five patients was last year.

Another change, with an eye for the beautiful, is the substitution of gilt edged leaves for the variously colored ones. It is bound in fine morocco cover, either supplied with patent clasps or the plain flap. The general arrangement remains the same as last year. It contains a perpetual almanac for fifty-seven years (from 1861 to 1917); the Metric System; general Posological Table (doses given according to both systems); doses for hypodermic injection, inhalation, suppositories, and pessaries; treatment of emergencies (poisoning, poisonous bites and wounds, asphyxia and drowning); examination of the urine; new remedies and pharmaceutical novelties; table of signs for Record; visiting list; record of accounts and memoranda; index to visiting list; table for calculating period of utero-gestation; obstetric record; vaccination record; addresses and memoranda; record of deaths; cash record. Nothing in the way of information has been omitted which it seemed to the editor might be useful to have ready at hand, while it has, at the same time, been compressed into the smallest possible space. We, therefore, feel confident that the Pocket Record will continue to gain popularity with the profession.

The Physician's Clinical Record, for Hospital and Private Practice; with Memoranda for Examining Patients, Temperature Charts, etc. Philadelphia: D. G. Brinton, 115 South Seventh Street, 1881. Price $1.00.

Most physicians in active practice have undoubtedly felt the want of a convenient Pocket Record, in which they could jot down right at the bedside of each patient the principal symptoms, such as pulse respiration, temperature, state of the secretions, etc., together with treatment. A regularly kept record of this kind would not only facilitate the study of each individual case, but would in the end form the basis for valuable statistics, etc. Moreover, a record thus kept would be apt to be more correct in its details than if taken down in a larger book after returning home in the evening after ended day's work; nay, it is the only way in which it could be kept free from error. The volume here under consideration is small enough to be carried in the coat-pocket, complete enough to allow of the essential entries and comments, and large enough to contain the entries of over a hundred cases kept under daily observation for two weeks. A small stencil plate accompanies it, to be used for sketching an outline of the thorax and abdomen, in which may be marked, by shading, the seats of effusion, the size of organs, the position of tumor, etc. The book contains, besides forms for clinical records and blank pages for stencil sketches, also temperature charts, memoranda for examining patients, examination of internal organs, and of the urine, together with symptoms of poisoning, etc., etc. The companionship of this Record will tend to make better diagnosticians as well as therapeutists, as it will not only compel the physician, as it were, to examine his patients thoroughly and to prescribe carefully, but also enable him at any time to study the results. We, therefore, think that no physician can hereafter afford to do without the "Clinical Record." It is gotten up in neat style and handsomely bound in cloth.

The Anatomist, being a Complete Description of the Anatomy of the Human Body; intended for the Use of Students Preparing for Examination at the Royal College of Surgeons, and other Medical Bodies. Second Edition, Improved and Enlarged, by the Addition of One Hundred and Seventy-one Wood Engravings. By M. W. Hilles, formerly Lecturer of Anatomy and Physiology at the Westminster Hospital School of Medicine, etc. New York: G. P. Putnam's Sons, 27 and 29 West 23d street. 1881. Cloth, 16mo. pp. 360.

With the excellent manuals of anatomy by American authors already in existence, the necessity for republishing an English work in this country seems questionable. Those, however, who may prefer text-books of foreign origin, and do not particularly care to encourage home authors will find the "Anatomist" as reliable as any other; and from its peculiar arrangement it seems especially adapted for a dissecting room companion, as it introduces the various tissues of the body, in the order in which they are encountered by the student while dissecting. The book is well illustrated, the cuts, which are all good, numbering one hundred and seventy-two

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A WEEKLY JOURNAL,

Issued every Saturday.

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ADMONITIONS FROM PATHOLOGY.

A most cheering sign in the investigations in histological pathology of recent years, is the immediate practical bearing they have on the public health, the assistance they at once give to the sanitarian in the *prevention* of disease and death. It is no longer the time to indulge in hair-splitting distinctions between contagion and infection, and disputes as to fomites and quarantine. These researches show that the proximate cause of disease arises from pre-existing disease, and they emphasize in the strongest terms the importance of isolation and disinfection as means to check the perpetuation of the morbid process.

Another and significant lesson they teach is that there is a solidarity between the human and lower species in the forms and products of disease. Man holds no serene and superior position in this respect. His sufferings bring him into union with all the rest of organic nature. In his deteriorations and degradations he is subject to the same laws as other creatures, and would he understand these laws, and knowing them, shield himself from their baneful influence, he must study them as they act in the humblest forms of organic life around him.

How closely the pathology of the vegetable world is allied to that of the animal, and how much we can get from a study of it, has been pointed out by Professor GUBLER, and later by Sir JAMES PAGET. So little had the profession appreciated this, that the address of the latter, published last winter, surprised many of them, as opening an entirely new field of research. This exemplified how little pathology is looked upon as a broad form of natural activity, inseparable from every description of organic life, identical in its main features and uniform in its simple process throughout the whole realm of specialized existence.

Some of these ideas were forcibly put in a late address of Dr. CHARLES CAMERON, at the Social Science Congress, which met in October, in Dublin. He gave a review of the researches of PASTEUR, KOCH, KLEBS, and other recent investigators into the relation of micro-organisms to disease, and pointed out how interesting they were to the world at large; how really vitally important they are to the sanitarian, the philanthrophist, and the statesman. But we will give an extract in his own words.—

"In the first place, all this teaches, in every line, the necessity, from the standpoint of public health, of regarding every person suffering from an epidemic or contagious malady as a hot-bed swarming with living organisms which cause and spread the disease. It should be the duty of the public sanitary authorities to provide convalescent homes for patients recovering from serious infectious diseases, where they might be taken care of until all danger of the propagation of infection by them had ceased. Were this duty attended to, the recent discoveries as to the nature and causation of disease leave not the smallest doubt that we might be spared many epidemics, and that one disease especially—scarlatina—might be made to show a very different death tale in our tables of mortality. In the second place, the whole history of the chain of discoveries which have furnished the topic of this address seems to teach the enormous importance of the study of comparative medicine and pathology—of medicine and pathology, not in their connection with human diseases alone, but as branches of a science affecting the whole animal and vegetable world."

The results here named cannot be estimated too highly; they should be most carefully considered by the profession, and every effort be made to induce the governmental authorities of towns and states to act upon them. It is not a question of theories; it is no hobby-riding of particular "views;" it is an undoubted acquisition of knowledge which Dr. CAMERON refers to, and opens the way to save thousands of lives to the State; to guard thousands of parents from the bitter loss of their offspring, thousands of our fellow beings from the agonies of disease and painful death.

Here is a scope for philanthropical endeavor wider than HOWARD had in the prisons of Europe, more pressing than the dubious advantage of civilizing remote savages, more urgent than the suppression of war or the repression of population. Who will be its apostle?

NOTES AND COMMENTS.

Hip Deformity in Coxalgia.

At a recent meeting of the Sociè è de Chirurgie (Oct. 5, 1881), M. Verneuil observed that he had treated a young girl, aged nine years, for coxalgia, by complete immobilization of the joint, for a period of three years and a half; she was cured without the slightest deformity remaining. About one year later he saw the young girl and found very pronounced deformity with apparent shortening, elevation of the pelvis, but without any trace of sensibility or of inflammation about the joint. Remembering the cases cited by Valtat in his thesis, where permanent progressive flexure at the knee, through paralysis of the triceps, without arthritis, ensued after prolonged immobilization of the joint, M. Verneuil sought if such could happen for the hip joint. And in effect he found a complete paralysis of the gluteal muscles in this young girl. The deformity was due to the tonic contracture of the psoas, the adductors and the sartorius, with an elevation of the pelvis difficult of explanation.

This case demonstrates, like many others at the knee and hip, that deformity may supervene late in the disease, without inflammatory symptoms, solely on account of the paralysis of certain groups of muscles and the tonic contraction of their antagonists.

M. Verneuil has sometimes, in such cases, obtained definitive cure by electricity, and he considers that it is to the contraction or paralysis of certain groups of muscles that the deformities (attitudes vicieuses) at the hip joint are due, in coxalgia. The abduction, external rotation and apparent lengthening of the limb, observed at the debut of coxalgia, are the result of the contraction of the iliacus and the gluteal muscles; the external rotation, adduction and shortening through elevation (ascension) of the pelvis, which supervene later, are due to the paralysis of these same muscles. The contiguity of these muscles to an inflamed joint explains the contraction at the debut of the disease; later on they become atrophied and we have the deformity of the second period.

Capsicum Annuum in Metrorrhagia.

M. Cheron, in the *Revue Med. Chir. des mal. des Femmes*, recommends strongly cayenne pepper in all forms of uterine hemorrhage, whether due to fibroid tumors or to fungous endometritis, or even to epithelioma. He was first led to essay this remedy by the good effects observed from its use in hemorrhoids. A large number of physiological experiments led him to consider it as having a special action on the vascular system, and hence on organs very rich in blood vessels, such as the utero-ovarian system, the organs of respiration and the brain.

Cayenne pepper acts like ergot on the non-striated muscular fibres of the vessels, either directly or through the vaso-motor system, and it has the great advantage over ergot, that it is well supported by the stomach, acting as a stimulant to its functions. The medicament can be given in pill form, two grains before each meal, increasing to four grains, or the watery extract in the same dose, or in tincture, much diluted and given more frequently.

Oakum as a Local Application.

The *Bull. de Therapeutique* states that Dr. Constantin Paul uses oakum with marked success in subacute diseases of the joints; it is simply wrapped round the parts in a layer of one to two centimeters in thickness, and kept in position by a bandage. It has proved useful in *arthritis deformans*, and a case of gonorrhœal rheumatism is mentioned in which its favorable action is described as astonishing. It is said also to succeed not only in articular affections, but in all cases in which iodine is recommended for external application. It produces the best results in bronchitis, and takes the place very efficiently of the Burgundy pitch plaster.

Remedies in Consumption.

In the *Practitioner*, for October, Dr. R. Saundby, recommends in consumption the symptomatical plan of treatment, and tabulates his remedies as follows:—

Specific; quinine, cod-liver oil.
Cough—liquorice, camphor, codeia lozenges.
Bronchitis—turpentine inhalations.
Purulent expectoration—eucalyptus inhalation, sulphate of iron.
Anorexia—quinine, peptonized food, malt extracts, cod-liver oil, ether, alcohol.
Diarrhœa—sulphuric acid, starch and opium enema, ergot enema.
Sweating—sulphuric acid, atropine, picrotoxin.
Hæmoptysis—sulphuric acid, ergot, ergotine.

If the patient be suffering from cough, profuse purulent expectoration, anorexia, diarrhœa, sweating, and slight hæmoptysis, it is very easy to combine the remedies in the following manner:—

℞. Quiniæ sulphatis, gr. j.—specific and tonic.
Ferri sulphatis, gr. v.—for profuse expectoration.
Acidi sulphurici dil. ♏ xv.—for sweating, diarrhœa, and hæmoptysis.
Aquam, ad. ℥ j. M.
Fiat mist. ter die sumenda.

This may have a minim of liq. atropiæ sulph. added to each dose if it should not check the sweating. In addition, the patient requires some liquorice, camphor, or codeia lozenges, and cod-liver oil, and perhaps wine; but, so far as medicines are concerned, only one bottle is needed.

If any symptom should assume greater importance, and not be held in check in this way, all other treatment should be suspended, and the remedies suggested for that symptom should be used alone until it is controlled.

Malingering in Children.

It is of the highest importance for physicians to understand that simulation and dissimulation are characteristics of certain temperaments at very early ages. Deliberate and persistent malingering is quite possible within the first decade of life. A striking instance in point is given in a recent number of the *Nord. Med. Archiv*:—

A girl seven years old, daughter of a laboring man, complained of pain in the knees and tendons of the legs, and lay in bed more than two months with her thighs drawn close up to the abdomen. After this, the child, who lived at a distance, was seen for the first time by Dr. Malmgren, and examined, with the result that no disease could be detected. The legs were now forcibly extended, and a bandage was applied. The next day, the child, being tired of this, declared that she could lie without being bent up. The parents took off the bandage; she lay straight, but said that she could neither walk nor stand on her legs. In this state her parents allowed her to lie six or seven weeks, in the belief that she was paralyzed. She now, however, conceived the idea of counterfeiting dumbness; she could no longer be induced to speak. Dr. Malmgren endeavored, by means of pinching and pricking and the induction-apparatus, to make her utter a sound; but not until she was told that she would be removed to his house, did she recover her speech and confess the deception.

We all of us remember the Danbury *News* man's description of the schoolboy's toothache, which commenced one hour before school, rose to a maximum in three-quarters of an hour, and disappeared miraculously just two minutes after he had been excused. More serious are the undoubtedly frequent cases of assaults pretended by young girls, often without any motive, whatever. Physicians should be extremely chary of crediting such statements unless supported by other evidence.

Sponge Grafting.

Such is the name applied by Mr. D. J. Hamilton, to a method of filling a vacuity with a prepared antiseptic sponge, which becomes organized, through its similarity to the growing tissue, and aids materially in the process of filling up a vacant part, as after excision of a tumor, etc. There is considerable novelty in this suggestion, and it may prove to have wide applications in the surgery of the future. Mr. Hamilton has a paper of thirty pages, with numerous illustrations, on this topic, in the Edinburgh *Medical Journal*, for November, at the conclusion of which he says:—

So far as I see at present, the method of "sponge-grafting" seems excellently suited for growing new tissue where that is insufficient to cover a part or to allow of stretching, but whether it may not have a wider range of application remains for future experience to demonstrate. The only objection which I perceive to its application is the somewhat long time required to organize it. During the first ten days I found that a part of a sponge placed in the abdomen had organized from an eighth to a quarter of an inch, but it always happens that

one part organizes quicker than another, and hence, although in a large wound one part may thoroughly organize in, say a month, other parts of same sponge require longer. I cannot see, however, what objection there would be to the patient going about, if this were practicable, after the sponge had once become fixed. On the contrary, I should think that this might actually, in certain cases, exert a beneficial influence upon the organizing powers of the tissues.

On the Use of Maltine.

Dr. Fothergill says, in the *Practitioner*, that in order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase, as "maltine." But, as Dr. Roberts points out, in order to make this ferment operative it must not be taken after a meal is over. Rather, it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like matter, and mixes readily with the milk, gruel, etc., without interfering either with its attractiveness in appearance, or its toothsomeness; indeed, its sweet taste renders the gruel, etc., more palatable. A minute or two before the milky mess is placed before the child or invalid, the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it, before it is placed on the nursery table, we should hear much less of infantile indigestion and malnutrition.

Forms of Chronic Pneumonia.

With reference to the results of acute attacks, Prof. Charcot, in his "Leçons professées à la Faculté de Médicine," describes three distinct forms of chronic pneumonia, which may succeed to acute inflammatory affections of the bronchi and of the pulmonary parenchyma, and are often confounded. The first form represents the chronic stage of acute pneumonia, having its principal seat and origin in the alveoli. He termed this chronic lobar pneumonia. The second and third forms are chronic broncho-pneumonia, and chronic pleurogenic pneumonia, succeeding to inflammation of the bronchial tubes, or of the pleura respectively. These divisions are based on the primary seat and nature of the general lesion, all partial chronic pneumonias—such, for example, as are met with around tubercular deposits in the lung, being excluded. The first form, or chronic lobar pneumonia, is the result of the persistence of the pneumonic exudations in the alveoli—resolution being either slow, or frequent relapses of the acute disease occurring. The peculiar character of this form is the absence of dilatation of the bronchial tubes. The second form is always secondary to broncho-pneumonia. The great characteristic of this form is the dilatation of the tubes.

The Micrococcus of Blenorrhœa Neonatorum

Dr. Otto Haab writes, in a recent article:—These organisms appear to be identical with those found in gonorrhœa, the characteristic appearance being that in these secretions the micrococci are almost entirely confined to the nuclei and protoplasm of the pus cells, and do not appear to any extent in the intervening fluid. They are sometimes single, but more frequently double (diplococci), two spherules lying together, separated by an extremely fine interval. This undoubted existence of germs justifies the use of strict antiseptic measures in the treatment of ophthalmia neonatorum.

Anteflexion and Dysmenorrhœa.

The relation which uterine anteflexion bears to dysmenorrhœa was the subject of a recent paper which Dr. Hermann read to the Obstetrical Society of London:—

The purport of the paper was summarized in the following propositions: 1. There is no anatomical evidence that anteflexion causes any hindrance to the escape of menstrual fluid. 2. There is reason to think that well-marked anteflexion is present in nearly half of all women who have not borne children. 3. Therefore it is to be expected that anteflexion and dysmenorrhœa would frequently coincide. 4. Dysmenorrhœa is, practically, as common when the uterus is straight as when it is anteflexed. 5. Painless menstruation is, practically, as common when the uterus is anteflexed as when it is not. 6. When dysmenorrhœa and flexion go together, the severity of the pain bears no relation to the degree of the bending. 7. Dysmenorrhœa associated with anteflexion, is frequently cured without straightening the uterus. 8. There is no evidence that straightening the uterus invariably or even frequently removes dysmenorrhœa which is associated with anteflexion, and in which other methods of cure have been ineffectual. 9. These facts show that the relation between anteflexion and dysmenorrhœa is not that of cause and effect, but merely that of coincidence.

The Society expressed some difference of opinion as to the correctness of these propositions, but agreed that the paper was one carefully prepared.

Special Reports.

NO. XXI.—DISEASES OF THE KIDNEYS.

(*Concluded from p.* 663.)

RELATIONS OF RENAL AND CARDIAC DISEASE.

This forms the interesting theme of a paper by Dr. Robert Edes, printed in the Cincinnati *Medical News*, Nov., 1881. He collects a number of facts and observations, showing how closely diseases of the heart and kidney are allied. His conclusion is to the following effect:—

We cannot help seeing, from the facts to which it is the merit of Johnson, of Gull and Sutton, and of Mahomed to have drawn our attention, that the form of Bright's disease attended with interstitial nephritis is more than renal, and that the cardiac and vascular changes may occupy the foreground of the clinical picture. We must also observe how often organic disease, more or less marked, occurs in other regions than in the muscles of the heart and in the kidney, the peri and endo-carditis, the pleuritic adhesions, the endarteritis of large and small vessels, diminishing their elasticity, and thus demanding an increased expenditure of force to drive a given amount of blood, the usual coincidence of a similar interstitial hyperplasia in the ganglia connected with the kidney, and possibly its not infrequent occurrence in the nervous centres and their membranes.

We are brought by these facts to admit the existence of a fibro-hyperplastic diathesis, with perhaps no special tendency to particular organs except so far as influenced by their functional activity, but since the heart and vessels among the muscular organs, and the kidneys among the secreting, are more constantly active than any others, most frequently making itself manifest in these, with effects which vary with the different structure of the organs.

These new pathological views must excite considerable interest in others as well as students of this branch, as they point to a new and promising field in pathological investigation.

MORPHIA IN DIABETES MELLITUS.

In a well marked case of diabetes, Dr. Webber reports, in the Boston *Medical and Surgical Journal*, Sept. 22, 1881, clearly good results from a strict diabetic diet, backed by a quarter of a grain sulphate of morphia, twice or thrice a day. The Doctor speaks in his commentary as follows:

The benefit of the morphia treatment was immediately apparent. The only inconvenience from the morphia was the production of pain if the dose was taken too soon after eating. The patient was allowed to take it between meals, at such a time as should best guard against this discomfort, and doing so no unfavorable symptoms followed. Although for several days he took one third of a grain of morphia three times a day, it did not cause sleep nor give rise to unnatural drowsiness, thus illustrating the toleration of diabetic patients for that drug.

HOURLY VARIATIONS IN THE CHARACTER OF URINE.

In one of the recent numbers of the *Medical Record*, Dr. W. P. Mason gives some valuable observations on the hourly variations of the acidity, specific gravity, amount, and urea in the urine of a healthy man. Breakfast was at 8 A.M.; dinner at 1 P.M.; supper at 6 P.M. The examinations were made in cold weather. No great amount of out-door exercise was taken, but the subject was on his feet, engaged in active laboratory work, all day. The results are represented by the author in charts, but may be summarized. The curve of acidity rose slightly after breakfast, and fell at noon, then rose steadily to its maximum; at 3 P.M. it fell very low again; at 6 P.M. another rapid rise occurred, nearly equaling the last, reaching its maximum at 8 P.M., after which there was a steady fall to 11 P.M. The specific gravity varied less, falling, however, after breakfast, rising slightly after dinner, maintaining that rise toward night, with the exception of a drop from 7 to 8 P.M. The amount of urine reached its maximum at 3 P.M., rising to and falling after that time. The urea showed a rise about two hours after each meal, the maximum being at 3 P.M.

ALBUMINURIA IN THE YOUNG.

The frequent occurrence of albumen in the urine of young people was brought to the notice of the profession lately, by Dr. Clement Dukes, an English physician, who pronounced it to be physiological in character.

Dr. George Johnson, however, the eminent London practitioner, reviewed the matter carefully and stated his belief that all such cases are pathological. His reasoning led Dr. Dukes to a closer study of the subject, with the result that he also came to the conclusion that these are not physiological cases, but often the incipient stages of Bright's disease. He says, in an article in the *British Medical Journal*, Nov. 12th, 1881:—

Their *history* is this. An adolescent has symptoms that make me search for albumen; either morning headaches, disappearing as the day goes on; or marked dyspepsia; or increased impulse of the heart and arterial tension; or slight œdema observed in the face; or a feeling of debility, and even syncope; albumen is found, and is followed for years. The heaving heart; and the increased arterial tension are sometimes so marked that I can diagnose the albuminuria from it alone, and I am led to examine for it in consequence. Part of this increased cardiac and

arterial impulse may be physiological, and owing to causes connected with puberty; part may be due to the hyperæmia of the kidneys.

It is intermittent in *character*, occurring perhaps at one time of the day only; or one day, and then not again for several days; or several days, and then absent for weeks. It is also intermittent in *quantity*, sometimes copious, sometimes only a trace; but it is persistent in this intermission, and progressively increases.

Its *cause* varies. Sometimes scarlatina has preceded; sometimes it is hereditary; more often its cause is untraceable, it having arisen and progressed insidiously. Microscopically, there are no casts or cells. That this albuminuria is not connected with the secretions of puberty, as has been suggested, is beyond question; for, whether it be copious or scanty, old or recent, it can be got rid of in an hour or two by putting the patient to bed and giving milk only; and it can be reproduced almost at will, by getting up and giving more diet. That it is owing to hyperæmic kidneys is, I think, clear.

In the same journal cases of albuminuria are recorded in children of the age of three and a half and five months.

CANCER OF THE KIDNEY FROM THE IRRITATION OF A CALCULUS.

A specimen supposed to illustrate this was recently shown to the Pathological Society of London, by Dr. N. MOORE. It is a most interesting point, as bearing on the general etiology of cancer. In the specimen mentioned, the kidney was very much enlarged, and its pelvis was occupied by a calculus weighing about three ounces and a half. There was some calculoid material plugging the ureter, which was considerably thickened. There were no secondary deposits. Microscopically, the new growth was found to be epithelioid, originating in the kidney tubules. It was no doubt, therefore, a primary cancer of the kidney, apparently resulting from the long-continued irritation of the stone. The patient was only twenty-five years of age. Many years ago, when a child, he had fallen from a swing, and had complained of kidney pain, and had since passed blood in his urine, and also pus.

The President, Dr. SAMUEL WILKS, remarked on the analogy of this case with cancer of the liver produced by the irritation of gall-stones.

OXALATE OF LIME IN THE URINE.

The presence of this substance in the urine is the subject of a paper by Dr. J. B. MARVIN, published in the September number of the *Medical Herald*. He states that he knows of no more frequent cause of the temporary appearance in healthy urine of oxalate of lime, than the free use of tomatoes and carbonated beverages during the hot weather, when the skin is acting freely, causing a diminished flow of over acid urine.

He adds: I do not believe in the so-called oxalic acid diathesis or oxaluria. The oxalate of lime is the result, and not the cause, of the numerous symptoms which have been described as being associated with it. In the great majority of cases, certain disorders of digestion are the cause of the so-called oxaluria. I would not have you think lightly of the frequent or persistent presence of oxalate of lime in the urine. Two serious results may follow its presence; structural disease of the kidney, or formation of a calculus; pyelitis, catarrhal or suppurative, and parenchymatous disease of the kidney may result from the continued irritation caused by the passage of microscopic calculi of oxalate of lime.

In regard to treatment, he does not offer much that is new. The general lines he lays down thus:—

Keep the skin clean and active; more out-of-door exercise, less spirituous drinks, and proper attention to quality and quantity of food. The routine treatment, by nitro muriatic acid, does good frequently, not by dissolving the deposit, but simply by improving the digestion. Frequently it fails. Alkalies, with bitter infusions, sometimes act happily, especially if the urine is scant in quantity and of high specific gravity. Oxalates being soluble in acid phosphate of sodium, I have been using for several years, with success, Horsford's acid phosphate, in drachm doses, well diluted, before each meal. This is an agreeable mixture, aids digestion, and acts as a mild diuretic, and tonic. Phosphate of sodium, in solution, with phosphoric acid, would doubtless act as well. In case a calculus has formed, the treatment varies according as the stone is renal or vesical. If the latter, it is obvious that surgical interference is necessary. If renal, we try to prevent any additional formation by such treatment as is outlined above. Withhold such foods and drinks as increase the formation of oxalates; apples, tomatoes, carbonated drinks, etc. If the stone is large and giving much trouble, as indicated especially by suppuration, nephrectomy is called for, and in the light of recent experiences, undoubtedly justifiable.

No doubt these are useful rules for practice.

THE USE OF BETHESDA WATER IN DIABETES MELLITUS.

This is reported on in the *Brit. Med. Jour.*, by Dr. WM. MURRELL. The case was far gone when he began, and it terminated fatally. The observed results were as follows:—

1. The average of the last eight days of ordinary diet gives 367 ounces of urine and 10,559 grains of sugar *per diem*.

2. The average of the last twelve days of ordinary diet and Bethesda water gives 365 ounces of urine and 10,493 grains of sugar *per diem*.

3. The average of the last twelve days of restricted diet gives 146 ounces of urine and 2,403 grains of sugar *per diem*.

4. The average of the last eight days of restricted diet *plus* Bethesda water gives 180 ounces of urine and 2,987 grains of sugar *per diem*.

Dr. MURRELL'S opinion is that the Bethesda

water deserves a more extended trial, both in diabetes and in Bright's disease.

The immediate cause of the death in this case was acetonemia.

CORRESPONDENCE.

How Long May the Fœtus Survive the Mother?

ED. MED. AND SURG. REPORTER:—

On the 14th of October, 1881, I was called by a messenger, a lad of twelve or thirteen years of age, who said that Mr. Thomas wanted me "to come and see his wife," and added that he was told to tell me to be as quick as possible, for she was dead! It was a strange message, indeed, requiring me to go to see a dead woman; but recollecting that I had heard it said that the lady was enceinte, I thought it was possible that she had been unexpectedly taken in labor, and had flooded to death, and that the husband had sent for me with the hope of his wife's resuscitation. With this idea in my mind I ran to the house, a distance of eighty or a hundred rods, and met one of the neighbor women, who said, "Doctor, isn't this horrible?" "What is the matter?" "Why, Mrs. Thomas has fell into the branch and is drowned." I went on into the house and found the woman lying on the edge of a bed with her clothes wringing wet and her body cold and limber; face purple, and froth running out of the nose slightly; there was some mud and sand in the nostrils; pulling open the clothes, the breast showed a pinkish congestion; there was not the least sign of a pulse or heart beat. She was turned over on the side and chest and artificial respiration commenced, by raising and lowering the arms, and compressing the back of the shoulders. This was done several times and then the body was allowed to turn on the back again. I now thought of the child in utero, and I laid my ear over the womb, and found the fœtal heart could be distinctly heard, and the motions of the child could be felt besides. The heart would run along for several beats pretty regularly, but very fast, and then end up with a tumultuous flutter of the child in its prison. I now demanded assistance in the case, in order that the child might be delivered by Cæsarean section, if by no other operation. A tub about half full of clothes and water was standing in the room, and I ordered it emptied, and the woman was placed upon the side of it and gently rolled, as if on a barrel, for a few times, and while on the tub, another attempt at artificial respiration was made. Artificial respiration was kept up until I, at least, was tired out, and again she was put back upon the bed and the fœtus again examined. It was still alive, although not a sign of returning life could be discerned in the mother. In order to prove the correctness of my judgment of the condition of the child, I sent for my stethoscope; in the meantime the artificial respiration was kept up.

When the stethoscope came I again examined the condition of the fœtus, whose heart sounds could be yet distinctly heard, as well as the motions of the child felt, which motions were now of a shuddering character. A neighboring physician now came in, who, by the way, is an irregular, and I told him hurriedly that the reason I had sent for him was to consider the advisability of delivering the child by the Cæsarean operation. By this time the house was full of curious and excited people, who, when I mentioned taking the child away from its dead mother, threw up their hands and cried out in horror. "that it would never do in the world and that the child would not live anyway." I asked the husband how long the mother would have gone until her time was up, and he said about ten days. I asked him then if the child should be delivered or not, and he replied, "I don't know what to do; you know your duty, do it." Then the "prominent" man of the village again spoke up and said it would not do; and then another "prominent" man, who always follows the other one in all he does, chimed in and said it would not do, in his judgment, to deliver the child, as it would not live. I said he didn't know whether the child would live or not, nor I would not undertake to say that the child would if it was delivered, but that I did know that if it remained where it was, it was bound to die. The "Doctor" now had found out which way the popular wind wa blowing, and thought "it would probably be a useless operation."

The fœtal heart was still going, and I told the Doctor so, and he laid his hand upon the womb and said that the womb was warm. Sure enough it was. A fire was ordered built by me, about the time the Doctor arrived, when it was ascertained that every bit of the fire had burned out, save one or two little sparks that were found imbedded in the ashes. The wash-boiler was on the stove, containing clothes which the women who were present thought had been boiled. My counsel had left the room with the prominent men, and I was now on my own responsibility, to act as I pleased. I determined, if the mother in-law was present, and was willing, with the husband, that I would extract the child by myself. She was not in the place, and did not come for over a half an hour. During this time, I, with the rest, set to work to find out, if possible, how long the woman had been dead. It was thought, from the water being cold that she had been washing in, and from the fire being out, and all other indications in the house, that the woman had been dead an hour and a half or two hours. And from the fact that the slop-bucket was found in the branch beside her, it was thought that the woman, after washing awhile, had carried the morning's slop to a pig which was in a pen on the opposite side of the branch to the house, and in returning to the house with the slop-bucket, had taken a fit, which she was subject to, and fell off of the crossing into the branch, which was from eight to eleven inches deep in water. When the husband came home from his work at noon, he found his wife lying on her back, with her head in a hole, which on measurement was found to be about eleven inches deep, with the water flowing over her face. He pulled her out of the water and called for help, which, when come, assisted him to carry her to the house, and then the messenger was sent for me. It was fifteen or twenty minutes after twelve o'clock when I first saw the case, *and the fœtal heart continued*

to beat until about half-past one, keeping up its beating for an hour and a half after I got to the mother, who was thought by everybody, myself included, to be dead. (The woman that laid her out said they felt the fœtal movement up to near 2 P.M.)

Now I have written this, first, to ask the profession how long the fœtus in utero will live after the death of the mother; and secondly, to make a confession of neglected duty. On the first point I am unable to learn anything definite from my brother practitioners in the neighboring towns, nor can I find anything satisfactory in my limited library. The only information I am able to get from the library is from the MEDICAL AND SURGICAL REPORTER, vol. xli, page 166, and that goes entirely counter to the above detailed experience of the writer.

I want to know how was it possible that the fœtal heart continued to beat for an hour and a half after the mother was dead, if dead she was? There is not the slightest suspicion of foul play by any one, from the husband. In talking with my preceptor, Dr. J. J. Ferry, of Taylorville, Ill., he said he could conceive how the fœtal heart might continue to beat in this way, viz., That at the moment of the seizure of the woman with the epileptic fit the heart had contracted vigorously, and had filled the arteries entirely full, and that the fœtal heart would continue to beat until the capillaries had dragged the whole amount of the oxygenated blood out of the vessels and into the placental circulation. I have this objection to his explanation, viz, it is said (Dalton) that the time occupied by the circuit of blood is only about twenty-five seconds, and I can't see why the circulation should be so slow after the vis-a-tergo force was removed.

Mrs. Thomas was about twenty-seven years of age, had been married a little over four years; she was light complexioned, and had red hair. She was taken with her first fit about her twelfth year; was carrying a bundle of peasticks in the garden and fell to the ground without warning. Another fit followed in about one year. The third fit occurred in August, 1877, following a long spell of continued fever, on the first day after her illness that she undertook to do any work; was getting dinner and was suddenly seized with a fit, which, in all the stages, "lasted part of an hour;" resumed her preparation of dinner and ate her meal with relish. The fourth fit came on in a few months after her marriage, in June, 1878. The fifth fit occurred only a few days before her child was born, which was on the 5th of February, 1879. The sixth one occurred on September 26th, 1881. This is the only one of which she ever had any warning of their coming on. The seventh and last fit was on the date of the beginning of this artic'e. J. J. CONNER, M.D.

Palmer, Ill., November 28th, 1881.

Questions in Vaccination.

ED. MED. AND SURG. REPORTER:

As I have a high appreciation of your able journal, and for no one thing more especially than the means it affords its readers for intimate communion with each other through its column for "Queries and Replies," I will, with your permission, attempt to throw some light on the subject inquired of by Dr. E. C. Helm, of Chicago, Illinois, in your last issue.

In reply to his first question, I would say that there are persons who resist the influence of vaccination, and also of smallpox, after repeated exposures, and live to old age without having taken either disease. But that it is altogether possible that there have been periods when, if properly exposed, they would have taken either of them. I have a brother, now fifty years of age, who has never been successfully vaccinated, although after repeated trials during infancy, youth and manhood, I did with my own hands give him a very full inoculation of *warm bovine lymph*, directly off of a heifer that was furnishing virus of the most active kind. He has also been exposed to smallpox contagion, and has never taken the disease. The answer to No. 2 is included in the above. In reply to query No. 3, I would most emphatically say, that as I have known that the child in utero can be influenced by variolous poison through the mother, so can it also take on the vaccinous infection, and that it will, for a time at least, be protected from either vaccinia or smallpox. The answer to No. 4 is, that it is altogether possible. Cicatrices, from the same causes, differ very much in character and degree in different individuals, and while there should be a *typical* vesicle and scar following vaccination, both the vesicles and the resultant scars differ to a considerable degree especially is this the case when bovine lymph is used. After it has passed two or three times through the human subject the peculiar areolated vesicle followed by pitted cicatrix is more certain to be found.

As more space would be required to fully answer the inquiries of Dr. H. than your journal can afford, I would respectfully refer him to Seaton's valuable "Hand-book of Vaccination," and would direct especial attention to chapter IX, which treats of "Skill and Success in Vaccinating, and of Insusceptibility to Vaccination." The whole chapter fully sustains the position I have taken in these answers; but my own experience with individuals insusceptible to the influence of both diseases would make the proportion of such persons in this country much larger than has been found to exist in England, at least at the time of the publication of the above book, viz., 1868. In a foot note on page 196, I find that "of upward of nine thousand vaccinations performed at the Blackfriar's Station of the National Vaccine Establishment since 1859, there has been but one case which on a second trial was unsuccessful. In this a third attempt was made, but the child was not brought back for inspection, and the result is unknown." In conclusion, let me say, for the benefit of the virus sent out by all other producers, as well as for that sent out by "Jenner Vaccine Farm," that the want of success in vaccinating, in ninety-five out of every hundred cases, is owing more to the want of care in keeping the lymph after having procured it, and to *want of skill* in introducing it into the arm. This last proposition, I am aware, will be hooted at by many, especially by those

who boast of the experience that a thirty or forty years' practice has afforded; but alas, too few of these gentlemen appreciate the fact that while the operation of vaccinating appears to be a very small one, a *great deal of skill* is required for its proper performance. This is a fact that Jenner, Ring, Dunning, Bryce, and many others fully understood, and they strongly insisted that persons should be *specially* instructed in the work, and that they should be possessed of a competent knowledge of that which they have to do.

J. L. Suesserott, M.D.

Chambersburg, Pa., Dec. 5th, 1881.

Ed. Med. and Surg. Reporter:—

In a late issue of your journal I find some interesting views in relation to vaccination expressed; besides a few questions asked.

To the first question, I would say that there is in *no one* any such thing as insusceptibility to the action of good vaccine virus, properly inoculated, and that there is no proof of any protection without the scar remaining plainly visible at the part of the body where the insertion was made.

Second question. The absence of a cicatrix, even if the person has been repeatedly vaccinated, is no proof whatever of immunity from variola. Those physicians who maintain that because it does not *take* is an indication that it is not needed, evidently have had little experience with smallpox.

Third question. No doubt but effectual vaccination of the pregnant female secures, *for a time*, protection to her offspring.

Fourth question. No number of vaccinations without that indelible scar afford any protection whatever. I would say that I feel justified in giving these emphatic answers, for the following reasons:—

Within the past year I have made many thousand vaccinations, while on the New York Board of Health. I have seen (and I can prove, if necessary, what I write, by reference to cases), more than once, instances wherein vaccine repeatedly failed, and the person was afflicted with variola.

I remember a young Hebrew, ten years old, who was vaccinated year after year, without effect. This summer smallpox broke out in the house where he lived. More than four different families had the disease simultaneously. The boy's parents, in their anxiety for their boy, had him vaccinated four times within three weeks, while the disease was raging under their roof. The boy's sister, a young woman, was stricken down, but having been well vaccinated when a child, had only a few pustules on her arms, and was not confined to bed. All at once the lad was taken with the disease, in its most severe form, and recovered only with the best of care, after passing through a most terrible struggle. Another young girl of twelve years. She had been vaccinated many times with no effect. Her parents hearing that variola was prevailing, had her again within one month twice vaccinated, and the efforts of the surgeons were futile. The traces of the lance were plainly noticeable, when she was stricken down and died within one week from the time she took the bed. Possibly, it may be that those whose symptoms are antagonistic to vaccination may not *so readily* acquire smallpox; but of one thing there is no doubt, and that is, when the disease does attack them, it does so with all its malignity.

Vaccinate, and keep at it, if you are exposed. Use lymph of the point, no crust, and try the leg if the arm does not respond. You are not protected, if anywhere within (the range) of smallpox contagion.

T. H. Manley, M.D.

New York City.

News and Miscellany.

Correction.—In our report of Dr. Duhring's lecture, Reporter, Nov. 26th, he is credited with prescribing *half grain* doses of biniodide of mercury. It should read *one-twelfth* of a grain for each dose.

The Good Accomplished by the National Board of Health.

The great practical benefits derived by the country from the action of the National Board of Health is well set forth in Dr. Chaillé's report of its working in the Mississippi Valley this past summer. He says:—

"Granting that sanitary officers are the victims of the usual human infirmities, there can be no doubt that the two services, National and State, served to stimulate the vigilance and zeal, the one of the other. Great confidence is felt, and instances could be given to prove, that the presence of the national inspectors did tend to increase the efficiency of the State sanitary authorities in the discharge of their duties, and that good was done thereby.

Even unfounded rumors of yellow fever inflict much injury on New Orleans, if not promptly denied by those in whom perfect confidence is felt. Such confidence was felt and expressed in the local officers of the National Board of Health, even by Memphis, which is now, for good reason, the city most easily alarmed as to yellow fever, that there, as everywhere else, rumors were promptly suppressed as soon as official assurance was given that they were groundless. My attention was called to not less than a dozen rumors or causes for rumors, for the most part early in the season. All these proved to be groundless, and when assurance was given, not only of this, but also that information would be promptly given of any which might prove to be well founded, the rumor manufacturers, silly and timid, rather than malicious people, abandoned their occupation before the season was half over. There can be no doubt that many persons within, and many more without New Orleans bestowed great confidence on the National Board of Health; that great satisfaction was derived by them therefrom, and that much good was done.

The agents and officers of river craft and railroads were disciplined in sanitary inspections and precautions to an extent calculated better to prepare them for compliance with the more rigid discipline which would be indispensable, in a season of danger, for the protection of other communities. It is believed that much good was thus effected.

Finally, the presence of the officers of the National Board of Health with the avowed intention of reporting, not only the truth, but the whole truth, and of hesitating at no measure within their power calculated to protect adjacent States, has tended, undoubtedly, to arouse discussion, to disseminate sanitary information among the people, and to stimulate them to sanitary progress. Much good has been and will be due to this."

We would especially call attention to the force of this last paragraph. Most local Boards of Health have not and do not deserve any respect, from their inveterate habit of lying—not to put too fine a point on it.

Statistics of Suicide.

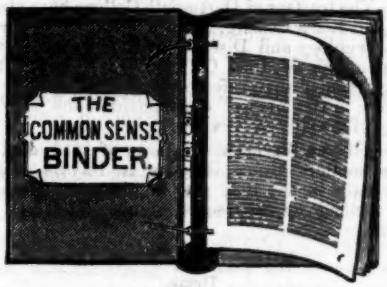
The little book of Dr. H. Morselli, lately published, gives some curious statistics of suicide. The facts of the increase and regularity of suicide would be most disheartening, were it not for the healthy summation that "the formation of character is the cure of suicide." "All that causes retrogression in a State or in a class of men is a cause of suicide." This principle covers even bad years of agricultural distress, financial crashes and manufacturing dullness, as well as all letting down of the individual by excesses in drink and dissipation. It might check a certain class of egotistic or vain suicides—the stamp Guiteau would be were he not such a coward—to know that the very fact of their taking themselves off proves that they belong to the weak and not highest order of human beings. Among religions the Jews show the smallest percentage of suicides, 48.4 per million; among Catholics the percentage is 62.3; among Protestants, 102.7; among other Christians, such as the Greeks, etc., 36.2 Dr. Morselli's researches are carried even into the statistics of special trades, all going to show that the trades which create luxuries have more fluctuations, and, therefore, more despairing suicides than the workers in necessary industries. At the same time, the agricultural list is heavy in some countries, while fishermen hardly can be said to kill themselves at all. The tables are made out for the whole of Europe, with special maps of "intensity" for the leading States. English women between fifteen and twenty kill themselves in larger percentage than the men do, and, in fact, up to thirty years this disproportion shows itself. Upon the continent generally the proportion of men who make away with themselves is much greater than that of the female sex. In cold countries suicides do not drown themselves; in Italy they do. But in the country of Ophelia, Danish women, up to the age of thirty, continue to choose this mode of death. Winter is not the time of year when suicides are frequent; the hot months are selected in preference. This remarkable book is an index to human misery—as well as to the subject of its title.

Death Rate in New York.

Although the death rate in Philadelphia has been remarkably high for the last six months, yet the increase does not compare with that reported from New York, where, during the last quarter, the number of deaths has been equivalent to a yearly rate of 35 per 1000 population—double the rate that Philadelphia has shown in its good years. The mortality among children in New York has increased nearly 50 per cent. over last year. For three months of 1881, there were 6102 deaths, as compared with 4401 in the corresponding period of 1880.

Russell's Common Sense Binder.

We give below a cut showing the form of this binder, which we have found the best we ever used. A number have been prepared, of a size to fit the REPORTER, and are lettered in gilt, with its name. They will be sent by mail, to suit subscribers, on receipt of seventy-five cents.



At the close of a volume, the numbers can be removed from the binder and regularly bound, or they can with equal convenience be left in it, and another binder be used for the next volume.

Effects of Hand-Shaking.

A writer in the Providence *Journal* condemns the custom of miscellaneous hand-shaking as inconvenient, useless, meaningless, liable to transfer diseases, and painful when carried to the extent which prevails in public life. On a previous occasion we have pointed out the absurdity of the custom, and fully concur with this writer in his conclusion:—

President Arthur is a man of fine presence and great social tact. Let him distinguish himself by substituting some more dignified and graceful ceremony for the rough form hitherto characterizing introductions at the American court.

College of Physicians and Surgeons of Chicago.

This institution has been recently organized, with the following officers:—

President, A. Reeves Jackson, A.M., M.D. Vice-President, S. A. McWilliams, A.M., M.D. Secretary, D. A. K. Steele, M.D. Treasurer, Leonard St. John, M.D. Board of Directors: A. Reeves Jackson, M.D., 271 Michigan Avenue; S. A. McWilliams, M.D., 125 E. Eighteenth Street; D. A. K. Steele, M.D., 1801 State Street; Leonard St. John, M.D., 492 Warren Avenue; Chas. Warrington Earle, M.D., 37 Park Avenue.

The Board of Directors state that this College has been formed in the interest of a higher and more thorough medical education, and that they intend to make its organization, equipment and plans of teaching so excellent and complete in every particular, as to enable it to take rank with the foremost medical schools in this country. The highest practical standard of preliminary acquirement will be fixed and exacted; a pupil age of at least four years, including a graded course of instruction covering at least three full winter sessions, will be compulsory: and the most satisfactory proofs of proficiency in every department of medical knowledge will be required of all candidates for graduation.

Personal.

—The trustees of Dartmouth College have elected Dr. Louis Elsberg, of New York, Professor of Laryngology and Diseases of the Throat in the Dartmouth Medical College, Dr. Elsberg having resigned the professorship he has held here tofore in the medical department of the University of the City of New York.

—Robert Warneck, a veteran of 1812, died in the Soldiers' Home Hospital, at Dayton Ohio, recently, in the 103d year of his age. His age is verified by the record of his enlistment, in 1812.

Items.

—In December number of *Lippincott's Magazine* is an entertaining article by Dr. William Hunt, on "Popular Fallacies about Surgery and Doctors."

—*Cure for Hiccup.*—"Frighten me. What for?" "I've the hiccups. Frighten me and they'll go away." "All right. Lend me five francs?" "Thanks, they're gone. Ta, ta."

—The deaths in Philadelphia for the last week in November were 355, as compared with 327 for the previous week, and 404 for the corresponding week of last year. Apoplexy caused the death of 11, consumption of the lungs 49, and old age 18. This return shows an unfavorable sanitary condition.

—An Evangelical of Hobart, Australia, it is said, refused to permit his child to be vaccinated, because the virus came from a member of the family of a Ritualist. He indignantly declared that his child should not be inoculated with Ritualism. "On the vaccination theory," says the *Independent*, "he did not act wisely. If the child had been inoculated, he could have only a very mild attack of Ritualism, a sort of religious varioloid."

—The Secretary of the California Board of Health writes to Health Commissioner Francis, of St. Louis, that a quarantine has been established on the Central Pacific Railroad, against trains from Chicago. Smallpox has been introduced along that railroad in five counties of California, and in every case, the writer says, the disease can be traced to arrivals from Chicago. It is said that the smallpox is also quite prevalent in St. Louis, "but the authorities are keeping quiet on the subject (in other words, lying about it)."

QUERIES AND REPLIES.

Dr. J. M. W., of Ala.,—The effect of gravity (posture) on parturition has been studied by several writers, especially Aveling. References to it will also be found in various treatises on obstetrics.

Dr. A. O. S., of Pa., asks for the best solvent for glacial carbolic acid—water, alcohol, or glycerine. We find it stated that both the last named are better than water, and are to be preferred. The solubility of pure carbolic acid in water is about one in forty.

Dr. Gonzales asks: "Is it possible for a gastric vertigo to last three months without intermission?"

Ans.—We should think not. Such a vertigo is most likely cerebral or aural.

Mr. Editor.—Your correspondent, H. E. H., of Wis., evidently does not possess the General Index to Ziemssen. On page 2 0 of that index will be found the formula of the meat solution of Leube, referred to. Ziemssen is almost worthless without this index, but with it, it is a mine of wealth waiting for the explorer.

E. J. B.

MARRIAGES.

RAY—KIMBLE.—At Honesdale, Pa., by Rev. Dr. Chas. S. Dunning, Dr. John A. Ray, of Brooklyn, to Carrie A., daughter of John P. Kimble, Esq., Honesdale, Pa.

WILLARD—McCAMANT.—On September 29th, 1881, by the Rev. C. L. Cooder, L. Willard, M.D., of Hatborough, Pa., and Sallie McCamant, of Cains, (Mount Pleasant), Pa.

RIED—MOSER.—On November 7th, 1881, by the Rev. F. P. Bender, at the residence of the bride, Mr. Henry Wm. Ried, M.D., of Manchester, N. J., and Miss Pauline Moser, of Philadelphia, Pa.

ROBERTS—POWELL.—On October 12th, 1881, by the Rev. Thomas A. Robinson, Dr. William H. Roberts, of Chicago, Ills., and Anna M. Powell, of Winnebago, Ills.

SCHRAMM—ORUM.—Before the civil authorities at Aix-la-Chapelle, on September 7th, and in Brussels, on September 8th, 1881, at the Church of the Resurrection, by the chaplain, Rev. J. C. Jenkins, M.A., Dr. Raimond Schramm, formerly of New York only son of Mr. Rudolph Schramm, late Prussian Consul General at Milan, and Mary Barker Orum, only daughter of the late Morris Orum, of Cincinnati. The Hon. James O. Putnam, U.S. Minister Resident at Brussels, gave away the bride.

SEABROOK—NASON.—At Montclair, N. J., on November 2d, 1881, by the Rev. Dr. H. W. Bellows, Harry Seabrook, M.D., and May Nason, daughter of the late Joseph Nason, all of New York. No cards.

SIMON—NORRIS.—At Boonton, N. J., at the residence of the bride's parents, November 9th, 1881, by the Rev. G. H. Whitney, D.D., assisted by the Rev. J. A. Kingsbury, Charles I. Simon, M.D. and Jessie Benton Norris.

STURGE—TURNER.—In Canton, China, August 27th, 1881, by Rev. B. C. Henry, E. A. Sturge, M.D., of Bridgeton, N. J., and Annie E. Turner, of Philadelphia.

DEATH.

THOMSON.—At Mount Savage, Allegany Co., Md., December 2d, 1881, Alexander Thomson, M.D., aged sixty years and eight months.

Dr. Thomson had practiced thirty-five years at Mount Savage, and won the highest esteem from his many acquaintances and his professional brethren. Resolutions of respect were passed by the Medical Society of Allegany County.